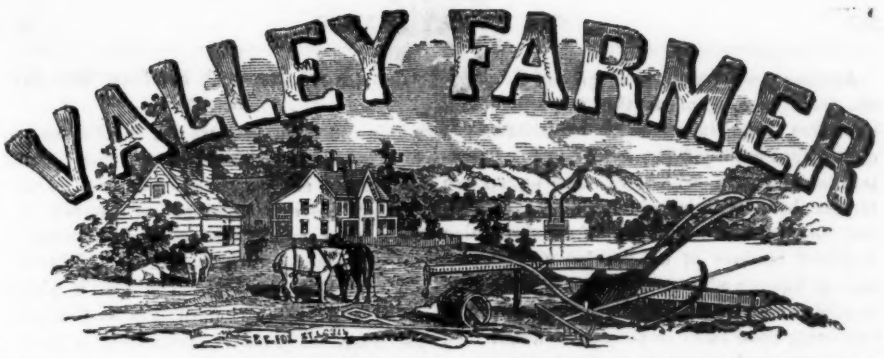

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Importation of Grain into Great Britain; American Manufactures.

The British government recently published full returns of the imports of Agricultural Products, Live Stock, &c. into the kingdom for *nine months*, ending with September, 1859. These returns afford some interesting facts for the consideration of American farmers and manufacturers.

The importation of wheat and flour into England from all countries, is in quantity equal to 6,541,254 barrels of flour in 1859, while in the same period of nine months the previous year it amounted to 7,332,411 barrels. Of this large quantity, 7,257,411 barrels were furnished mostly by Russia and France, while the United States furnished but about 75,000 barrels, and in 1859 hardly 20,000 were imported from the United States. The wheat supplied by France to England during last year was more than one-third of the whole amount bought, and of flour nearly 90 per cent. of the whole quantity imported. France with a dense population, cultivating an old soil, manages to supply this immense surplus of grain to England. England being chiefly engaged in manufactures, it is impossible to raise from her soil food sufficient to sustain her inhabitants, the deficiency being equal to $8,000,000, per month, or over $96,000 000 a year.

This immense sum, except the small proportion of it furnished by the United States, is paid for in cash, because the protective policy adopted by France, Russia and other countries of Europe, which furnish these provisions, exclude British manufactures, and receive only gold in payment, while the amount of the precious metals more than equal to this is annually paid by the United States to Great Britain for her manufactured goods. To meet the balance of trade against us last year we paid to that country for goods, the most of which might have been manufactured at home! a sum exceeding by $30,000,000 the entire product for the same period of the gold mines of California. This large sum is chiefly paid for textile fabrics and iron, while we have the raw material for these goods at our own doors equal in quality to any in the world. Indeed no inconsiderable portion of this sum is paid for fabrics, the raw material of which is the product of American soil, transported more than three thousand miles, and is manufactured and returned to us at our own expense. So that, in fact, the United States, with a virgin soil capable of feeding the world, and with the raw material sufficient for the manufacture of every article needed for home consumption, is actually paying to Great Britain a hundred millions of dollars annually, which she pays over to other nations for the food she consumes while she is manufacturing goods for us.

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Although we purchase largely of England, she buys nothing of us that she can obtain elsewhere. Her importations of Indian Corn of late have greatly fallen off, while her importations of cotton, which no other nation can furnish her, have largely increased. Cotton, rice and tobacco are the chief articles which England receives of us, leaving an immense annual balance against us, which must be paid in gold. But for the discovery of the mines of California these large importations would long since have rendered the nation bankrupt.

A policy similar to that which exists between the United States and Great Britain, may be recognized as existing between the agricultural States of the South and West and the manufacturing States of the North and East. We furnish both the raw material for the Eastern manufacturer, and the food for the operatives, and buy their goods in return, paying transportations, commissions, &c; while we possess unlimited motive power at a much cheaper rate at home, for all manufacturing purposes. The cost of the transportation of the cotton to the Eastern mills, the wheat, beef, &c. to feed the laborers, while they convert the cotton into cloth, and the profits and charges on the manufactured goods back to us again, would afford the Western manufacturer a handsome profit alone; to say nothing of the difference between the cost of motive power where coal may be had for a little more than the cost of digging. The true policy of the South and West is to manufacture their own cotton and wool, and to consume their own corn and beef at home.

With the completion of the railroads now contemplated, coal will be delivered in most of our towns and cities at a low rate. Indeed, at the present time, its cost at our principal Western cities is hardly half that which is paid by the Eastern manufacturers. Besides the great facilities afforded us for the employment of steam, we have upon our Western rivers available water-power sufficient to run all the spindles and looms in Great Britain.

It is the true policy of every nation to unite in the same locality, the PLOW, THE LOOM AND THE ANVIL; and there is no country possessing so many of the advantages for these combined as are to be found in the fertile and prosperous valley of the Mississippi.

"Never let your tools and implements be exposed to the decaying influences of the sun, rain, and frost, except when in use." "A place for everything, and everything in its place," will pay at least twenty-five per cent. per annum, in this respect.

Rough vs. Smooth Surface Soil for Wheat.

It is not often that we see, in this country, fields sown to wheat that are too finely pulverized, or the surface too smooth. In traveling through the wheat districts of Genesee, New York, we have observed with pleasure the degree of perfection to which the wheat fields there are generally prepared. The soil is plowed, rolled and harrowed until it is as thoroughly pulverized as possible, presenting a marked contrast between these fields and those generally in the Great West. We are confident that much is lost by our Western farmers for want of a more thorough preparation of the soil upon which wheat is sown. In performing this work properly, much depends upon the implements employed. Besides a good plow, a harrow and roller are necessary. If the ground, from any cause, breaks up cloddy, whether intended for spring or fall crops, a roller should be run over it, followed with the harrow. On level land, if the clods are thoroughly broken, it does very well to leave the ground after the harrow. But upon land any way rolling or hilly, Croskill's Clod Crusher is the best implement ever yet invented to give the proper surface to the soil. This is a roller made in sections, or shells, about four inches thick, the circumference of each scalloped and pointed; these sections all revolve independent of each other on one shaft, and while it thoroughly pulverizes the soil to nearly the entire depth broken up, it leaves the surface moderately rough and uniformly indented, with no straight tracks or furrows, like those left by the harrow, to form sluices through which the water runs, carrying down to the valleys below the most fertilizing portions of the soil, but the thousands of little indentations caused by the teeth of the roller create so many little reservoirs to receive and drink up the water, as it falls, admitting of the least possible wash and waste of the soil. The wheat plants growing upon such a surface (when sown broadcast) are less liable to be acted upon by alternate freezing and thawing, and hence stand the winter better. A too smooth surface, for instance, when left after a common roller, is, if possible, still more objectionable than a cloddy, poorly pulverized surface, because this is liable to wash in heavy rains, and in dry weather the surface will become baked and cracked and liable to starve out the growing crop

Another implement is used in England for the purpose of breaking the clods and yet leave the surface rough. This is called Smith's Web-

Harrow. It consists of an iron chain web, connected by discs or small rollers, with serrated edges. These rollers do not revolve on a single shaft, like the clod crusher, but upon a broad web or net work, with a single roller at each cross of the web, the whole covering a surface of 25 square feet of ground. The rollers revolve obliquely, but it cannot, we think, operate as efficiently, and leave the ground in so good a condition for the protection of the land and the growing crop as the Croskill Crusher. The latter is made in several parts of the United States, and should come into general use.

LINEN AND FLAX.

We notice in an exchange, that a perfectly successful method has been adopted for the preparation of flax fiber for the spindle, in the form of "flax cotton." A vast amount of thought and labor within the last ten or fifteen years has been expended in experimenting on this material with the view to adapt it to cotton manufacturing machinery; and although several inventors claim to have been successful in this, no extensive manufacture has been established. That this process will yet be successfully accomplished, and flax fiber to a great extent take the place of cotton, which now has such a world-wide demand, we entertain not the shadow of a doubt. The demand for cotton is constantly increasing, and unless its culture is extended to other countries, or unless a substitute is found for it in some degree, the cotton growing regions of the United States will not be able to meet the demand. In view of these facts we know of no subject that presents a more encouraging field for study and invention than that of some economical mode of preparing flax fiber for the mill.

Dr. O. S. Leavitt has devoted several years of labor, and has expended a large amount of money in endeavoring to accomplish this desirable result, in which he claims to have been successful. But the Doctor has been unfortunate in his efforts to secure men and means to aid him in carrying his inventions into extensive practical operation. With the view to secure this end, and that the world may have the benefit of so important a discovery, Dr. Leavitt has written a letter to the editors of the *Scientific American*, in which he proposes to surrender his process and patented inventions to the public. The letter is as follows:

"Several years ago I invented various machines and processes by which linens can be made as cheap as cotton goods, at the average cost of cotton, by the use of unrotted flax, thousands of tons of which are thrown away as worthless throughout this country, it being grown only for the seed. I have four patents, but other valuable inventions have not been patented, and have been used only for tests in a private way. A full and satisfactory demonstration was made a few years ago, in your State, by a company which was broken up by the exposure of an attempted wrong (the details of which it is not necessary now to give) when the patents reverted to me. Since that time all my efforts to secure capital to bring out my inventions on a large scale have been unavailing; and knowing their great value to the world I design to surrender them to the public. With this view I have in course of preparation a work on the manufacture of hemp and flax, in which the various machines and processes, which have proved successful, will be described and illustrated with sufficient clearness to enable all machinists and manufacturers to build and use them.

"I also propose to lecture on the Commercial Causes Affecting Social Institutions," throughout the country, wherever my services may be required; proving (as I *can* prove to all persons of candor and intelligence) that linens can be made as cheap as cotton goods. My greatest regret in connection with this matter is that it is out of my power to lecture gratuitiously.

O. S. Leavitt."

Richmond, Ind.

Three Great American Inventions.

To America belongs the honor of giving to the world three of the greatest inventions of the present age. These are the Electric Telegraph, the Mower and Reaper, and the Sewing Machine, which constitute three great representatives of the commercial, the agricultural and the domestic worlds. Though mysterious and wonderful is the operation of the Electric Telegraph, yet it is but secondary in practical importance to the Mowing and Reaping Machine; for it is upon agriculture and its appliances that commerce chiefly depends. It was eight or ten years after the last great efforts were made to construct machines for cutting grass and grain, before they became practically perfect. Enough, however, was seen in the original mower of Ketchum and the reaper of Hussey to warrant the conclusion that complete success was attainable. It is seldom the case that the first inventors of a great design succeed in carrying it through to perfection. But these men having reached a starting point, thousands of others set to work to perfect what they had begun; one has overcome a difficult point here and another there, each having contributed something towards the completion of the work, until now, so far as the practical operation of these machines is concerned, the farmer has little more to desire. Yet, notwith-

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standing the great perfection to which these machines have been brought, they will, of course, be still improved in numerous minor points.

Without the aid of these machines it would be impossible at the present stage of the world's progress in other matters to harvest the grass and grain that are now grown, or to secure enough of these two crops to meet the wants of the present population. And while the mower and reaper have been pushed forward to their present degree of perfection, other departments of farm labor have received corresponding aid through the invention of other machines.

But while the telegraph is rendering such essential service to commerce, and the mower and reaper to agriculture, the sewing machine is, if possible, doing more to relieve the weaker branch of the human family from the severest portion of domestic toil.

The more valuable an invention proves to be, the more liable is it to become the prey of pirates, who seek to thrive upon the toil of other men, and hence these three great inventions have been the most fruitful subjects of litigation. But recent decisions have established the legitimate claims of those leading inventors, though at a cost of hundreds of thousands of dollars.

With the sewing machine, as with the mower and reaper, it is but recently that the chief difficulties in the way of its perfect operation have been overcome. The first patent issued for a sewing machine was in 1842, and this, like several subsequent inventions or improvements, failed of any practical results. In September, 1847, Elias Howe, Jr. invented the most valuable feature now connected with these wonderful machines—a feature that is indispensable to all subsequent inventions. This consisted "in forming a seam by a combination of the eye-pointed needle and shuttle." After being reduced to poverty in defending this right, in the courts of law, Mr. Howe is now reaping a rich reward from the patent fees paid him by the leading manufacturers of machines under other patents, for the right to use what is termed the "lock stitch." Since the issue of Mr. Howe's patent, about *three hundred* patents have been granted for various improvements in sewing machines.

In 1855 there were sold by eight of the most prominent manufacturers, 3,513 sewing machines, and in 1859 the same companies made and sold 46,243; but by far the largest number of these were made and sold by three companies, viz: Wheeler & Wilson, Grover & Baker, and I. M. Singer & Co. The patent fee received by Mr. Howe for the number of machines manufactured by these several companies during the year 1859, amounted to the handsome sum of $143,000. Up to 1853 he had not received a sufficient amount from his invention to pay the Patent Office fees.

The invention of the spinning jenny and the power loom wrought a wonderful revolution in the manufactures and trade of England, increasing the consumption of raw cotton from a few thousand pounds, up to *a thousand millions* of pounds in 1858. The invention of the power loom led to serious riots in England by the hand weavers, fearing that by this invention they would be driven to a state of starvation for the want of employment. And so it was apprehended on the part of those whose scanty subsistence depended upon the needle, when the success of the sewing machine became fully established; but no such results have been realized; on the contrary, they have proved the greatest blessings. Thousands of destitute families have toiled night and day with the needle, and received each, in return, from one to two dollars per week for their labor, where now, with the use of a sewing machine, they can earn from three to ten dollars per week. A shirt manufactory in New Haven, Connecticut, employs 500 of these machines. In Troy, New York, upwards of 3,000 of the same class of machines are at work in making shirts and collars. To make a fine shirt by hand fourteen hours of constant labor are required; with the sewing machine it can be accomplished in one hour. A coat that formerly required seventeen hours work to make, can now be done by the machine in three hours. Besides the immense saving of labor, and the superior quality of the work done by the machine, the comparative healthfulness of the two modes of labor can hardly be estimated.

Such are some of the important results of this last great American invention. These machines are now finding their way into the remotest corners of the globe. They are used in China, in Hindoostan, Australia, Turkey, Africa, South America, and in all parts of Europe. It will prove the greatest boon to woman of the nineteenth century, and the "song of the shirt" will be heard no more.

Amount of Hay in a Stack.—*Eds. Valley Farmer:*—Farmers frequently wish to buy or sell hay in the stack. Can you give any rule by which the amount can be determined?

Yours. F. H.

Reply.—There is a rule which we believe is reliable. It is to multiply the length, breadth and hight into each other, and ten solid yards will make a ton.

Care and Management of Timothy Meadows.

Timothy grass is chiefly valuable for hay; and the meadows should never be pastured while kept for mowing. In the South and West, Timothy meadows are liable to great injury, after the crop has been cut, by exposure to the burning rays of the sun in dry weather; and the injury is much increased by allowing the aftermath to be cropped by cattle and horses; and the injury is greater in the climate alluded to than it is in the cooler and more wet regions of the country where other grasses are more or less mixed with the Timothy as natural products. The roots of Timothy differ from any of the common grasses that constitute our pastures. At the base of each stool there are numerous little bulbs which lie near the surface of the ground which, when pastured by stock, are liable to be crushed beneath the animals' feet, and when the aftermath is eaten off the roots are exposed to the sun in the summer and fall, and to the frosts of winter, when in ordinary seasons the growth will not be greater than is required for the protection of the roots. All the pasturage afforded by Timothy meadows is not equal to one-quarter of the damage the succeeding hay crop sustains by allowing stock to run over them. Meadows that are never pastured will last much longer than those that are pastured, because the exposure of the roots by cropping the grass and poaching the surface of the ground, not only kills out the Timothy, but after being injured in its growth and partially killed out, weeds and inferior grasses come in and increase the evil already sustained. If in a very favorable fall the aftergrowth becomes so heavy as likely to interfere with the mowing machine the following season, sheep may be allowed to trim the surface, causing comparatively less injury than cattle or horses.

Blue grass and other pasture grasses, generally, are furnished with long, fine fibrous roots that run to a surprising depth, and hence these grasses are not liable to the same injury by being pastured.

In order to sustain a Timothy meadow in health and vigor, and expect large and increasing crops from it, a surface dressing of old, well-rotted stable manure or rich compost, should occasionally be applied in the fall. This will afford protection to the roots during winter, and the rains and melting snows will reduce the manure to a situation which will enrich and increase the subsequent growth much beyond the cost and labor of manuring.

There are few crops grown near the rivers that are more profitable than hay, yet there are none that are worse managed. Our suggestions, if fully carried out, would add at least fifty per cent. to the aggregate of the hay crop, and with but little additional cost.

The Result of Land Draining in England.

Land draining has long been practiced in England, and was introduced and carried on by private enterprize alone. The great landed estates in that country are chiefly owned by the lords and aristocracy of the kingdom; and so great were the benefits arising from a thorough system of land draining, both to the landlord and the tenants, that about ten years ago power was given by Parliament to the British Government to lend £4,000,000, under the sanction and control of the Inclosure Commissioners of England, for the purpose of drainage of land: and subsequently private drainage companies have obtained powers to perform the same work, under the control of the same Commissioners. Up to this time there have been expended in subterranean drains alone, by this means, about £4,000,000, extending over 800,000 acres; and probably twice this amount has been laid out by the Crown, by corporate bodies, and by private individuals. There still remain large tracts of land that require to be drained; and from the beneficial effects produced hitherto, an annually-increasing extent will undergo the same treatment.

It will be well for our American farmers to remember that although in England it rains more than half the days in the whole year, yet there does not fall but about half as many inches of water during the year in that country as there does in America; much of our land lies more flat, and the soil is equally retentive of moisture, and hence the greater importance of a system of land draining with us. We have no lords who both own the soil and have the direct control of the Government in this country, by whose influence our lands may be drained at public expense, and hence all land improvements must be made by private enterprize, and consequently they are slow in their introduction. The large amount of money loaned by the British Government for the purpose of land drainage has proved a profitable investment, not only to the government but vastly so to the landholders and the tenantry.

The probable loss in the wheat crop of the present harvest, owing to the action of the severe

frosts in December, while the soil was saturated with water, will amount to millions of dollars. In the South and West the most of the late sown wheat proved nearly a total failure from these causes. Much of these lands, had they been underdrained, the difference in this single crop would nearly have paid the entire cost of draining. This is the result of the experience of hundreds who have proved the matter by actual trial. The growth and exportation of wheat is rapidly increasing with us, and keeps pace with the increasing facilities for transportation. Though the wheat crop suffers the most from an excess of moisture, yet all summer crops are more or less injured by it. It prevents early planting, and often causes crops to be overtaken and cut short by summer droughts and fall frosts.

BONES, AS A FERTILIZER.

The inquiry is made of us whether bones are of sufficient value on our Western lands to warrant the labor and expense of gathering and applying them?

The question involves a number of considerations: Bones are rich in animal and mineral matters, both of which are essential ingredients in the growth of all farm crops. Indeed, it was from the soil that these ingredients were derived, in the form of grass, grain, &c.; and when entirely removed from the land in hay, grain, milk, butter, or beef, just so much of the natural elements of fertility are gone forever from the soil, unless restored again by artificial agencies. The mineral portion of bones consists chiefly of phosphate of lime and magnesia; the animal portion consists of cartilage or gelatine. Our Western lands, generally, are well stored with phosphates, and particularly those portions of Kentucky resting upon a limestone foundation. A large proportion of this limestone abounds in organic remains which are constantly decomposing by the natural agencies of time and imparting their fertilizing matters to the soil. On these lands it would not be profitable, at present, to incur great expense in procuring bones for the phosphates they contain; yet bones unburned or unboiled contain about 33 per cent. cartilaginous or animal matter, which, when decomposed, would prove valuable to crops generally.

In England and other portions of Europe, and also in the older States of this Union, situated along the Atlantic border, the constant grazing and cropping to which these lands have been exposed have so far exhausted their natural stock of phosphates, &c., that their cultivation is no longer remunerative, without the restoration, in some form, of these essential ingredients; hence in Europe the battle fields have been gleaned for the bones of the slain, and every other resource exhausted in order to meet the demand.

Bones are ground and applied to the land in the form of dust, or they are ground and dissolved in sulphuric acid and water, and form what is called super-phosphate of lime. It is chiefly in this form, and is almost the only manure used in England and Scotland for the production of the immense crops of turnips that are grown, without which these countries could hardly sustain their overgrown population. Bones are also largely applied in those countries in this form as a top-dressing for wheat and other grain. We have the record of one instance before us in which 600 pounds of dissolved bones were applied to a crop of wheat, and the produce was increased from twenty-nine to fifty-three bushels per acre, while a full dressing of barn-yard manure applied under the same circumstances failed, by six bushels per acre, to produce an equal quantity. There are numerous other instances in which more marked effects have been produced.

In Cheshire, England, noted for its superior cheese, where the lands have been chiefly devoted to dairy husbandry for many centuries, the soil has been so completely exhausted and impoverished by the removal of these particular substances, in cheese and butter that have been made and sold, that the application of large quantities of bones have become necessary, and the money expended for them proves a very profitable investment. It should be remembered that milk is found, by analysis, to contain largely the very materials of which bones are composed, and this is explained when we remember that it is from the milk of the dam that the solid materials of the frame of the offspring are built up. It is now claimed that on the lands of the Eastern States, comparatively new, that have been chiefly devoted to dairy husbandry, the natural phosphates have been so much exhausted, that the grass is so deficient in the bone-forming material, that both the calves and the older cattle are attacked with what is called bone disease, being so weak in the structure of their frames that they finally are unable to sustain their own weight. A remedy for this is found in the liberal application of ground bones to the land; but immediate relief to the animals affected is afforded in feeding to them bone meal.

The estimated commercial value of bones where their application has become necessary upon these exhausted lands, and predicated upon the value of farm crops, is upwards of $100 per hundred pounds. From this, then, it may be inferred that their application to land for ordinary crops in the West, at present, would only be profitable near where they are procured. On sandy hills, devoted to grape culture, we have witnessed the most marked effect from bones, even but slightly broken, and applied to the trenches from ten to eighteen inches below the surface. Where vineyard culture is carried on, as it is near Cincinnati and Louisville, contiguous to large pork and beef packing establishments such as are found in these and numerous other cities and towns in the West, we are sure that bones might be procured and applied to the soil to great advantage. The remains of the immense number of hogs' heads that have been submitted to the steaming process for the purpose of procuring the oil, would be found of great value in vineyard culture as well as for garden and farm purposes. These bones lose some of their value as a manure by being deprived of a portion of the animal matters in the process of steaming, yet much of it remains, and the bones are so softened that they are readily decomposed and reduced to the best possible condition for application to any cultivated crops. Where these can be procured within reasonable distance they may be applied to almost any land to advantage. At most pork houses these refuse matters may be obtained without price, for the mere labor of hauling. But where the bones are gathered for the mills they are procured at considerable cost, and when you add to this the cost of grinding, packing, &c. ready for market, besides the profit of the manufacturer, it would seem that in most situations where they can be procured within reasonable distance for the mere cost of hauling they could be applied to advantage, and to grapes to great profit.

When bones are reduced to super-phosphate it adds greatly to the cost (as well as to its immeate value as a manure,) besides the labor and expense of grinding. It is doubtful whether in this form the manure is profitable to the farmer in any portion of the United States, and only profitable to the manufacturer on account of the *foreign and worthless substances* that are too frequently added to it, in the process of manufacture. The cheapest and best method of decomposing bones that have not been steamed, is, after they have been broken or ground, to pack them in mass in alternate layers of moist ashes or horse dung, which, by fermentation, will soon reduce them to powder. Where bones can be procured it is better for farmers to manufacture them in this way than to buy them of the dealers in super-phosphates and manipulated guano, &c. These processes of manufacture seldom add materially to the commercial value of the articles manufactured.

Advantages of the Drill in Seeding Grain, over Broadcast Sowing.

The experience of the farmers of England and other portions of Europe in drilling in the seed of small grain, has long since established the advantages of this method of seeding. Indeed, the English farmers are not satisfied with the great advantages of the drill over broadcast sowing but they even go to the still greater expense *dibbling* in the seed by hand in order to secure greater uniformity in the depth and manner of depositing the seed. But in our country the low price of land and the scarcity of labor require that we should adopt some more expeditious method of seeding, and at the same time secure the greatest possible benefits, over the primitive method of scattering the seed promiscuously over the land, without regard to depth or distance.

In broadcast sowing from one-eighth to one-quarter of the seed is lost by being either covered too deep, or by not being covered at all, and liable to be picked up and devoured by birds, &c. before it begins to vegetate. Seed deposited at such irregular depth exposes the plants to injury from drought, as well as to the action of frost in heaving the roots out in winter. The various improvements made in the grain drill have rendered it quite perfect, so much so that any required quantity of seed may be dropped upon an acre, and at the same time at a uniform depth. The action of the drill upon the land leaves the ground in the best possible condition to protect the crop during winter from the washing rains and the injurious action of frost. Running the drills north and south, when practicable, secures another great advantage in giving free access of sun and air, and thus in a great degree checking the tendency to rust.

Besides the saving in the amount of seed sown, it has been ascertained that on most lands the drilled wheat will yield from three to five and more bushels per acre over that which is sowed broadcast in similar soil. Take the number of acres of land sown to wheat in any one State, and estimate the gain by this method of seeding, and it will amount to millions of dollars annually, enough to purchase a drill for every farmer

in the State and then leave a large surplus besides.

Among the many improvements recently made in the grain drill, we cannot recommend one over another. But it is better to buy a good one, at almost any cost, than to receive a poor one as a gift, and so of any other implement or machine. We might have said in order to use the drill with success the land must be well prepared, all the weeds and rubbish must be turned under, below the action of the drills. A thorough preparation of this kind more than pays for the labor bestowed, in other respects.

Every farmer who has ten acres of land to sow, would do well to secure a good drill in time for the coming fall.

Value of Cotton Seed Oil and Cake.

The increase in the production of cotton in the Southern States of the Union surpasses that of any other agricultural product of the country, yet the demand for the raw cotton by the mills in Europe as well as in this country is not fully satisfied. With this increase of cotton there has been a corresponding increase in the production of cotton seed. The proportion of the seed to that of fiber is very great, so that the the entire product of cotton seed in the Southern States amounts to many millions of bushels annually. Until very recently the attempts to utilize this immense production of seed, containing the very heart and life blood of the soil which produced it, had failed, and the only use, to any extent, to which it has heretofore been applied, has been as a manure to the poorer lands upon which it was grown. Recently inventors have turned their attention to machinery for the purpose of hulling the seed, and to processes for extracting the oil, in which some of them have been successful. There are several reasons why the cotton growing States are less favorable to the constructing of machinery and for carrying on extensive manufacturing operations than the States where manufacturing is the chief employment of the people; notwithstanding, the difficulties have been overcome, and several large oil mills have been established in the Southern States, and are now doing an extensive business.

In New Orleans, Mr. F. M. Fisk has a large establishment lately gone into operation. His machinery is driven by a thirty-five horse power steam engine. He now makes five hundred gallons of oil and upwards of five tons of oil cake a-day, requiring for the day's work about fifteen tons of cotton seed to produce this amount of oil and cake, each ton of seed yielding about forty gallons of oil and 700 or 800 pounds of cake. Mr. Fisk has shipped 800 tons of the cake to England, and visited the country himself for the purpose of introducing the article among the British farmers, who are extensive importers of linseed cake from all countries where it is manufactured. The cotton seed cake is highly esteemed for fattening cattle and sheep, and will probably find a ready market for all that can be produced.

In Memphis, Tennessee, another similar establishment has recently gone into operation where 1,500 gallons of oil and twenty-four tons of oil cake and meal are turned out daily. The oil is refined by a secret process, and it is made of two qualities. The best oil is used for illuminating and lubricating purposes, as well as for currying leather, &c. The inferior quality is found to answer the purpose of soap-making equal to palm oil, making soap of every quality, even to the most refined toilet soap.

We heartily rejoice to know that the immense amount of cotton seed, that has for so many years been but little better than thrown away, is to be turned to so good account. Our own farmers have too long suffered the linseed cake from our own mills to be sold and shipped to English ports to fatten foreign stock and to enrich foreign farms, when our own stock on our own lands are suffering for it. Cotton seed cake now sells at the mills for about the same price that linseed cake sells for. The English farmers, who consume the most of the latter, pay in freight, commissions, &c. about double the price that it will cost the American farmer; but as the cake requires some little care to prepare it for feeding, and Indian corn is grown and fed with so little trouble that our American farmers suffer immense losses in feeding corn whole and in a dry state rather than incur the little labor necessary to reduce it to the proper condition for successful fattening, it will not find favor until the increase of population, and consequent advance in the price of farm products, must soon induce our farmers to more economical methods of feeding. Cotton seed meal and corn meal, if applied directly to the hay that is fed to fattening animals, instead of the latter being fed alone and dry, and the corn unground, would add vastly to the profits of fattening. But our country progresses too fast for old farmers to change their habits and keep up with the improvements of the age. It is the young farmers in whom we have hope, and it is chiefly through them that

all the present improved farming, and the introduction of improved machinery has come into use.

We remember to have excited no little remark and ridicule from the old farmers as the first to introduce to the section where we lived, the farm cultivator, the threshing machine and the mower—of course less perfect than at present.

The Increasing Consumption of Tobacco.

We presume there are few persons who are aware of the immense amount of money that is now wasted in the purchase of tobacco, or of the rapid increase in its consumption. It would rather strike a reflecting mind that the use of this weed belongs to man in his *uncivilized* condition, and that as he rises in the scale of intelligence and refinement its use would gradually diminish, until it should be entirely banished from good society. Tobacco is a narcotic poison. To analyze the process of its use in any form now common to society certainly excites disgust, and when we take into consideration the baneful influence it exerts upon public health, it is truly wonderful that its consumption should continue to increase.

The Dean of Carlisle has recently delivered a lecture in England upon the subject of tobacco, which reveals some facts that may prove startling even to those who love it best.

In 1856 the quantity of tobacco consumed in England, amounted to *thirty-three millions* of pounds, at a cost of £8,000,000 sterling, or nearly $40,000,000, besides the vast quantity that was smuggled into the country. There is a steady increase far outstripping the proportional increase of population. In 1821, the average consumption per head per annum was 11.70 oz. In 1851 it had risen to 16.36, and in 1853 to 19 oz. or at the rate of one-fourth increase in ten years. There are 12 city brokers in London whose business is exclusively the sale of tobacco, 90 manufacturers, with 7,380 workmen engaged in the different branches of the business. In the whole United Kingdom there are no less than 252,068 tobacco shops.

In other portions of Europe the increasing consumption far exceeds that of England. In France it is enormous, and all this under a heavy governmental duty, which in some of the kingdoms, we believe, is equal to one thousand per cent. on the American cost. The Emperor of France realizes, under the government monopoly, 100,000,000 francs annually. In the city of Hamburg 40,000 cigars are daily consumed, while the entire population of the city hardly exceeds 150,000. In that city 150,000,000 of cigars are annually manufactured, employing 10,000 persons, many of them women and children. The entire business requires a capital of £4,000,000. In Denmark the consumption of tobacco is equal to 70 ounces for each inhabitant annually. In Belgium it is nearly 3½ pounds per head; while in America, where there is no government tax, and the article can be bought for the mere price of production and manufacture, the consumption is greater than in any of the European countries, and it is rapidly on the increase.

It is calculated that in the various forms of smoking, chewing, and snuffing, 2,000,000 tons of tobacco are made use of annually by the human family, equal to 4,480,000,000 pounds, or as much in weight as all the grain consumed by 10,000,000 of Englishmen, and equal in value to all bread material consumed in Great Britain. Five millions and a half of acres are occupied in its growth, the product of which at but the moderate sum of two pence per pound, would amount to the vast sum of £37,000,000 sterling, or nearly $185,000,000.

In these very countries where such an incredible amount of money is expended for what is worse than useless, there are millions of the human family suffering for a supply of food to meet the daily demands of nature.

Whether this vitiated human taste is to continue and increase with the race, or whether, through the progress of enlightened understanding, cultivation and refinement, it is soon to reach its maximum, and decline as it has risen, are matters that time must determine. But the facts and figures of the present time furnish a subject for the reformer and the philanthropist to contemplate.

The Amount of Hay Required for Cows—The Cost of Milk.—Otis Brigham, of Westborough, Mass., after seventy years' experience in farming says, in the New England *Farmer*, that good cows will eat on an average twenty lbs. of hay per day, when giving milk, and fifteen lbs. when dry—not by guess work, but tested by actual weighing for months at a time. Then it is easy to calculate the cost of milk. In the neighborhood of New York, the average value of hay is one cent a pound, and the quantity of milk not over six quarts. At 3½ cents a quart it will pay the hay bill and one cent a day over. If other feed is given, the increase of milk must pay for that. The manure will be worth at least the cost of attendance and milking. If the milk is worth more than 3½ cents, it gives a profit; and if less, a loss.

STEAM CULTURE.

Greater progress has been made in plowing land by steam power, since the first efforts in that line, than was made in mowing and reaping machines in twice the same time. We feel encouraged, then, in the hope that at no distant day we shall witness ten or fifteen acres of prairie thoroughly broken up in a single day, more effectually than it is now done with the best plows and horses and cattle at the rate of only two acres a day. The subject of steam plowing cannot be allowed to rest till this is done.

In a late number of the *Country Gentleman* we see a communication from our old friend, O. S. Leavitt, of Richmond, Indiana. Mr. L. has distinguished himself, after years of patient toil, by his efforts in constructing machinery, and adopting a process by which flax and hemp may be manufactured into various fabrics as cheaply as cotton. We are glad to see Mr. Leavitt entering this new field of invention—plowing by steam—and hope that he will succeed in procuring all the aid and encouragement necessary to forward his schemes to perfection. It seems he discards the idea of breaking the earth by draft plows, and proposes the plan we have so long advocated. He says:—

"Portable engines are coming into use upon large farms, for various uses, and I propose to build these portable engines in such a manner that my plowing attachment can be put on or taken off, in a few minutes, at any time. After testing the two main principles alluded to, by constructing a working model, *on* which two men represented the working power of steam engines, I elaborated a plan of which the following are briefly some of the principal features:

1st. When used for plowing, the whole of the power of the engine is applied to a revolving cylinder, working behind the machine, not unlike the wheel of a Western steamboat. This cylinder, in place of buckets splashing in the water backwards, contains steel blades or cutters moving through the earth backwards, resulting in two very important things, pulverizing the ground completely, and the whole power *re-acting forward* upon the machine, thus saving the power which others require to move theirs when dragging a gang of plows.

2. Gearing connects the plowing cylinder with the wheels on which the machine rests, so as to prevent the too rapid speed, and clutches used to *hold back* with.

3. Having a surplus power pushing forward more than sufficient to move the machine, I can draw several subsoil plows or coulters attached to a beam aft the cylinder, and sundry wheel coulters cutting sod all up into ribbons, say three or four inches wide, placed before the plowing cylinder; besides we may as well carry half a day's supply of wood and water.

4. The depth of plowing is regulated by the engineer, the plowing cylinder being hung in such a manner that it can be raised or lowered at pleasure.

5. The plowing apparatus being easily removed, the machine is a steam wagon, having locomotive power, and having in my partial judgment, several advantages.

First, The forward wheels as well as the hind wheels are made to revolve, so that at the pleasure of the engineer, every wheel that touches the ground pulls.

Second, It is geared in such a manner that the speed of the machine can be varied at will by the engineer, without varying the speed of the engines requisite to their full power; a point of great importance. A slower speed may be required when pulling a load up hill, or when plowing two feet deep; or a faster one when passing over a long ascending smooth grade, as a wagon, or plowing in light easy soil.

6. It can instantly be converted into a stationary engine for driving other machinery, by simply disconnecting the gearing by which the main driving shaft is connected with the ground wheels, when it can be used for driving threshing machines, grinding mills, saw mills, feed cutters, pumps for irrigating purposes, &c. &c.

7. By removing the plowing cylinder from its bearings, a ditching cylinder can be conveniently inserted, by which I estimate that a machine with engines the size of a pony locomotive, will make about half a mile of ditch about three feet deep, for underdraining purposes, in an hour."

This is what Mr. Leavitt proposes to do, and what no doubt will be done; if not by him, by some one else at no distant period.

The draft, or gang plowing system can never be successful, and we are anxious to see the attention of inventors turned to the plan of rotary plowing, which will do away with more than one half of the weight of the present ponderous machines.

[Written for the Valley Farmer.]

The Cheapest Way to Fertilize Land.

Small farmers cannot afford to give their land "rest;" they cannot allow it to lie in clover a year or two every five years; they must enrich it by direct means, and till every season. This necessity would soon impoverish their fields if a system of fertilizing, commensurate with the contribution, were not resorted to. This, common sense will tell every man—and common sense will also tell the farmer, that there is neither credit, profit nor pleasure in tilling poor land.

My plan of keeping up, and even increasing the fertility of land under yearly cultivation, and at very little cost and expense, is this:

Turn down your oats, wheat, or other stubble as early after harvest as is practicable. Set to buckwheat, turn this down when in full bloom, and set to rye; turn this down about the middle of May, and plant in corn or set to Hungarian. This system can be repeated at the farmer's

pleasure—and, before he is aware of it, he will have his fields rich, and no time lost. This is a simple system, and within the reach of every farmer—a mere tax upon his industry.

N. M. Harding.

The Details of the Farm.

Farming was the first, and is the legitimate occupation of mankind; indeed, it forms the basis of all other employments; yet, in more modern times, it has been considered by certain classes as rather a degrading employment. But it is a pleasing consideration that in the present period of the world, agriculture (which of course embraces horticulture in all its departments) is beginning to assume the high character and dignity, among the various employments of our race, to which it is entitled. Hence, we see thousands who have spent their youth and early manhood in the counting-room, at the bar, or in various other enterprizes, securing to themselves a few acres of land, with the view of spending the remnant of their days in the more natural, peaceful and quiet occupation of farming.—Among these classes, who are thus turning their attention to this department of human industry, there are many who have hardly, during the earlier period of their lives, given the subject a practical thought, and when they determine to become farmers, secure their land, and settle down upon it, know but little more of the details of farm operations than they do of the employment of the inhabitants of the moon. If a man has a natural taste for the pursuit and gives the subject his entire attention and study, of course he will, in a very few years, become a successful farmer. But there are many who are not so quick to grasp an idea of all the minutiæ of the business, who require a helping hand in the form of an every-day guide to all the practical details of the farm. The various agricultural periodicals of the day furnish much information that is valuable, giving a faithful record of the daily improvements that are being made in the operations of the farm, and the new and improved implements that are constantly coming into use, as well as the new plants, fruits, &c. that are introduced. We have some standard works under such titles as, "The Farmer's Guide," "The Practical Farmer," &c. These are more or less complete in their descriptions and details. But we have never seen a work so well calculated to meet the exact wants of the great number of men, who, in the meridian of life, are turning their attention from other pursuits to that of farming, as the work that now lies before us, under the following title: "*The Young Farmer's Manual: Detailing the Manipulations of the Farm in a Plain and Intelligible Manner: With Practical Directions for Laying Out a Farm, and Erecting Buildings, Fences, and Farm Gates; embracing, also, the Young Farmer's Workshop, &c. &c.* By S. Edwards Todd. New York: C. M. Saxton, Barker & Co.

This work commences with the A B C of farming, and describes minutely every operation which the farmer is called upon to perform, accompanied with numerous illustrations of buildings, walls, fences, gates, land draining, pruning and training trees, splitting timber, and indeed every operation of the farm, in so plain and simple a manner that he who runs may read and understand, and become at once a successful farmer, whether he has received an early training to the pursuit or not.

We have been so frequently called upon for information upon various subjects that are therein detailed, and have been taxed with writing so many essays for numerous friends on all the various subjects connected with farming, that we take pleasure in recommending the work to all new farmers, whether young or old. It is for sale, we presume, at most agricultural bookstores.

[Written for the Valley Farmer.]

LETTERS TO YOUNG FARMERS.

NUMBER FOUR.

Young Men of the Farm:—We propose in this number a motto, which may be applied to almost everything that relates to your calling and life, with great profit. It is this, "Seek for the best of everything." Young men are too often satisfied with the poor, the mean, the base. They have low aims, a mean ambition, base hopes. They erect a low professional standard, and crave insignificant positions in life. They think only of taking the plow-jogger's place. They feel themselves "hewers of wood and drawers of water" to the trades and learned professions, and so are content to do menial service to their superior neighbors. Against this base conception we urge all young farmers to war with resolute zeal. Let them place their calling high in their own estimation; let them believe themselves made to fill an honorable place in society, and elevate their aims and hopes to a corresponding position.

Having started out with noble aims, let them seek the best information concerning their calling, the best ideas of farm life, the best plans for successful operations, the best modes of tillage, the best rotation of crops, the best crops to raise both for profit and for the farm, the best seeds, stock, implements, buildings, fences, division of fields, fruits, &c. Let everything be of the kind that shall secure the best practical results, so that everything shall turn to profit. That farming is profitable just in proportion as it is well conducted, there can be no doubt. He who has the best of everything on his farm and does everything in the best way, always gets the best price, and enhances the value of his farm. He is himself above par, and so are his crops and his lands.

Among the best things to be secured none are more important than the *best soil.* If your soil is not the best it can easily be made so by fertilization and culture. The soil is the farmer's treasury, his stock in bank—he makes drafts upon it every year; but by proper attention and care it may be enriched and improved, while it yields a heavy profit.

It is not to be expected that the young farmer

shall know by experience all that is best in relation to his farm; but he may have the best information, purposes and resolutions. He may commence with his mind in the best condition and his heart wide awake to the success and honor of his vocation. There is no excuse now for an ignorant and reckless farmer; for stupidity and slovenliness. He may know before he begins, the theory of good farming; he may know the experience of the best farmers; he may profit by the experience of others; he may learn from others' successes and failures; and so may begin where good farmers have left off.

Another matter of no little importance to the young farmer is his *social surroundings*. These he should seek to have the best. To live in a degenerate neighborhood, to be surrounded by ignorant and groveling associates, to have no public spirit, no thought or care for the condition of society, no ambitious desires for the intelligence and moral well-being of communities, is surely most calamitious. Good roads, schools, churches, social order, a public spirit in a neighborhood, enhance the value of lands and crops, the safety of property and life, and the importance of life to us. The farmer should feel that he is a part of civilized and refined society; that in proportion as that society is rendered enlightened and morally improved, is his life rendered more valuable and important. The rural districts of our country ought to be as enlightened and refined as any. The value of a farm depends not a little upon its social surroundings. Let these be the best; let them be continually improved, and the real farming interest will improve with them. Let the young be always on the side of all public enterprizes that tend to develop the resources and improve the condition of the country; of all reformatory and educational movements; of all that shall promote speedy travel and conveyance; of all that shall improve the markets, quicken the enterprize and promote a high cultivation.

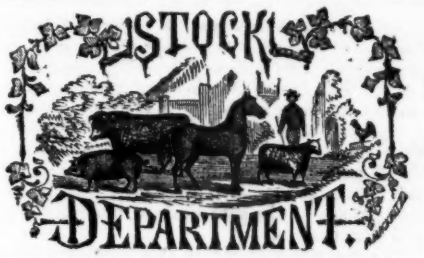
The *morality* of a rural district is a most important matter. It is in the country as in the city. Property ranges in value much in proportion to the moral and social standing of the neighborhood. Property is almost valueless in some portions of every city. The same influences operate in the country. A high morality is favorable to men's material interests. The better the people are, the more valuable is their property and their labor. A profane, debauched, and immoral community degrade the business, the social life, the dignity and the value of everything connected with it. Young farmers, therefore, should understand to start with, that their future success is dependent upon many things. It behooves them to see to it that everything is the best of its kind. True, young men cannot make the community around them; but they can do much to improve it; they can favor the right; they can be on the side of progress, they can throw all their influence in the scale of virtue and honor: or they can locate in good neighborhoods and ally themselves to the best of everything in social life, in morality, education and religion.

[Written for the Valley Farmer.]

GOOD TILLAGE.

During the last few weeks we have been on the wing almost continually and have been much impressed with the importance of good tillage. The wheat crop in our travels from southern to northern Illinois, from southern Missouri to central Iowa, depends almost wholly upon the manner in which the soil has been managed. That which was sowed early and well put in—that is, which was put into a well pulverized soil, well plowed and harrowed, and then drilled, almost invariably looks well; while the late sowed, the broadcast sowed and that sowed on a poorly prepared soil, generally gives but a poor promise of a harvest. We have never before been so struck with the very great advantage of the drill. We believe the half has not been said in its favor. The difference between broadcast and drilled fields is so distinct that the untaught eye will observe it. Often when they are side by side the broadcast field will not pay for harvesting, while the drilled will yield a good crop. The long spring drought has made this more apparent. The drilled wheat has grown right along, because put in deeper, and in the furrow of the drill, giving it more moisture and protection; while much of the broadcast has dried up. The same difference is observable between well and poorly plowed fields. The well plowed have resisted the drought and afforded both moisture and nutriment to the growing wheat, while the poorly plowed have dried up. The wheat crop depends so much upon good management, that it is almost useless to sow, unless the ground is put into good order and the wheat put in at the right time, and in the right way.

Similar remarks might be made in relation to the present corn crop. Fields that are properly prepared and planted give now a rich promise, while those that have been indifferently prepared and planted have suffered much from drought, and now show a poor prospect. The same is true of oats, broom-corn and nearly every other crop. The farms that are well cultivated, promise now to yield an abundant return this season, while the poorly cultivated will make a poor return for the labor bestowed upon them. This season will demonstrate the importance of good tillage. And in good tillage there is nothing more important than deep thorough plowing. It has many advantages, not the least of which are resistance of drought, in dry seasons, draining in wet seasons, improvement of the soil and cleaning it of weeds and wild vegetation. Let any man travel from farm to farm in every section of the country during the growing season and witness the different modes of culture, and he must be convinced that good tillage is the secret of success. We recommend that farmers should travel some; that they should seek of each other the best information on the subject of tillage. The experience of the last three years has convinced observing farmers that good tillage is absolutely necessary to success even in the West and on the best soils. The great effort must be to farm well; to do everything in the best way and in the right time *



THE CATTLE EPIDEMIC.

The cattle disease introduced into Massachusetts last year from Holland, still continues to excite great interest throughout the farming districts in the Eastern States; and the alarm is increased as the disease spreads to other States. It now prevails to a considerable extent in the New England States, and has reached New York and New Jersey. At a special session of the General Assembly of the State of Rhode Island, stringent measures were adopted to prevent the introduction and spread of the disease into that State. The act recently passed provides, that "no railroad or incorporate company, or persons, shall bring, transport, or introduce any neat cattle into this State from any place whatever, except as hereinafter provided," &c. The town councils are empowered to make such ordinances as are necessary to prevent the spread of any infection, and very severe penalties are attached to the selling of any animals infected with the disease; and any one violating any of the provisions of the act is subject to a fine of $300 for each offense. The introduction of each animal, in case of the introduction of a number of neat cattle contrary to law, is deemed a separate offence. Commissioners have been appointed by the Government to obtain full information concerning the malady, and persons have been appointed to guard the roads and highways of the State from the passage of cattle in violation of the recent acts of the Legislature.

Governor Hall, of Vermont, is visiting the infected districts in Massachusetts for the purpose of investigating the subject of the disease.

Governor Morrill, of Maine, has also appointed Commissioners to investigate the cattle disease, who have made a report.

The Philadelphia Society for "Promoting Agriculture," have appointed Drs. Elwin and Emerson, and they have also been appointed by Mr. Clemson of the United States Patent Office, at Washington, as Commissioners to act with Dr. Antisell who had previously been appointed by the Government, to proceed to Massachusetts to investigate the causes of this fatal disease. Their report will be made to the Philadelphia Society, and also to the Patent Office immediately.

A meeting of the Board of the New York State Agricultural Society was held on the 21st of June to consider the subject. A number of the most distinguished farmers of the State were present. Col. Johnson, Secretary of the Society, in company with Mr. Tucker of the *Country Gentleman*, having spent some time in visiting the infected districts in Massachusetts, presented an interesting and valuable report on the subject. Previous to the reading of the report a committee was appointed to wait on the Governor of the State and invite him to be present. A series of resolutions were passed recommending a course of treatment similar to that which we had previously written and published in this connection.

We also notice that the Governor of Indiana has appointed Thomas H. Collins, Esq. of New Albany, as Commissioner to visit the State of Massachusetts for the purpose of collecting all the important facts connected with the disease, so that the farmers of the State may be enabled to combat it successfully, in case it should come within the bounds of that State.

Gov. Wood, of Illinois, has issued a proclamation, calling upon the farmers of the State, the agricultural societies, and owners, officers and agents of steamboats, railroads and canals to take every precaution to prevent cattle which may be infected with pneumonia from being brought into the State. He also commissions Dr. Andrew McFarland to go to the States where the disease now exists, to gather all the information possible regarding its nature and its cure.

We have not room to allude to all the causes that have led to the spread of this disease, or to the numerous remedies recommended in case of attack. The most speedy and sure preventive is a total extermination of all animals that have been exposed to contagion, and this has been adopted and carried out to the sacrifice of some hundreds of thousands of dollars worth of valuable animals. Until this plan is adopted wherever the disease makes its appearance, no time should be lost in separating all the cattle on the farm, not allowing more than two to remain together, and if possible not more than one in a place, until the disease has fully manifested itself and the diseased animals may be known from those that are sound and then killed. All yards and stables that have been occupied by diseased ani-

mals should be thoroughly whitewashed and all the straw and rubbish hauled out and plowed under or burned.

It is a matter of the first importance that measures be adopted in all the States where there is traffic in neat cattle to prevent the introduction and spread of the disease. There is more danger from dishonest and unprincipled dealers than from any other cause, who will buy diseased cattle at a low price for the purpose of speculation. A case occurred in an Eastern town where a dealer bought at a low price a number of cattle and attempted to drive them in the night to another town. They were discovered while on the road and ordered to stop. The driver refused peremptorily and pushed ahead, but before he had gone a mile he was overtaken by a force sufficient to compel him to return.

Our Western friends have already suffered largely by that still more mysterious disease among the hogs, and now to have our herds of cattle attacked by a disease, if possible more subtle and equally fatal, would result in a loss too serious to be borne, if any vigilance that can be employed will prevent it.

In infected districts we have much to fear from the spread of the disease during the period of the fall fairs. It would be better not to exhibit neat cattle where there are any signs, or the remotest prospect of the introduction of this disease.

[Written for the Valley Farmer.]

Wounds and their Treatment.

BY HENRY CORBY, VETERINARY SURGEON, ST LOUIS.

[Concluded.]

We come now to the consideration of contused and lacerated wounds, which differ from those previously described, in that they are not simply separation of tissues by violence, but are also associated with the death of a greater or smaller portion of the parts on which these wounds are inflicted. This death of the part may either follow immediately upon the infliction of the wound, or some time will elapse before the parts that have been injured entirely lose their vitality. In either case the healing process is retarded, and instead of the quick union by exudation from the vessels holding the cut parts together, these wounds have to heal slowly by granulation.

In healing wounds in this manner, the same material before spoken of, is exuded from the blood vessels, but instead of furnishing an immediate bond of union it simply covers the injured surface, and remaining there, one portion liquefies, and is changed into the pus, or matter, which covers the sore, and another portion solidifies and becomes gradually converted into new tissue. If the pus covering the outer surface of such a wound be wiped off, this newly formed tissue may be seen in the shape of little granular projections, very red, and bleeding easily if injured. But before this healing process can be carried out, it is necessary that all the dead or dying parts shall be removed; and this is effected by a gradual decomposition and liquefaction of these parts by which they are separated from the living, gradually pushed to the surface by the growth of the granulations beneath them, and thus cast off.

The rapidity with which this is effected varies materially in different structures; in those that contain a large quantity of blood, as the muscles or skin, it is quickly accomplished; but in bone, tendons and cartilage it is very slow; those tissues being sparingly supplied with blood vessels.

This is often a source of much trouble in the healing of contused wounds; on the back, for instance, where they are often produced by an ill-fitting saddle; if such a wound only implicates the skin, the dead parts are soon got rid of, and the wound heals; but if not only the skin but also the fibrous structures beneath have been injured, then the wound will long continue unhealthy in its character, and the healing process prove tedious.

Another cause which often retards the healing process in contused and lacerated wounds, consists in the bruised condition of the parts surrounding the actual wound; their blood vessels become overloaded producing great swelling, and by reason of this the circulation in the vessels which should furnish the material for repairing the injury is damaged, and the healing process thus hindered.

This derangement of the circulation in the surrounding parts may be so extensive as to cause their death, and this is then likely to extend over a larger surface and cause the death of the patient.

Having thus described the mode by which such wounds are healed, and the favorable or unfavorable circumstances which attend them, I come to a consideration of the manner in which they should be treated so as to insure a sucessful termination.

In the first place all foreign bodies should be carefully removed from the wound; then, if any pieces of skin or other tissues are partially detached, or are so torn by the injury as to render it certain that they will die, they may as well be removed at once; but in the case of injured skin, as little as possible should be cut away, for new skin does not easily form, and if much be lost, a large scar will be left when the wound has healed.

After this, there is much tumefaction of the surrounding parts, and consequent likelihood of their death from gangrene; frequent fomentations with hot water should be applied, and the wound dressed with a liniment of turpentine. If the wound have an offensive smell, and a thin, dark colored discharge flows therefrom, it should be carefully examined to see if any dead tissue can be removed; free vent should be given to the discharge and some disinfectant used. As soon as a thick; yellowish discharge appears, the great danger of gangrene has passed, and the

healing process may be known to have commenced; all that is then required consists in keeping the parts quiet and clean; if the animal is much annoyed by flies attacking the wound, use either oil of tar or fish oil around it; the oil of tar however is the best for keeping off flies.

When the granulations have reached the level of the skin, they contract and gradually draw the edges of the wound nearer together, and at the same time new skin begins to form from the edges of the old so as to cover the granulations.

Sometimes, however, they rise above the level of the skin and constitute what is called proud flesh in a wound. It is then necessary to reduce them to the level of the skin, either by caustic applications or by pressure.

With regard to the general treatment of animals while such wounds are healing, it is rarely the case that medicine is required, but in some cases swelling of injured parts may be alleviated by giving diuretics, as nitre, in half ounce doses for two or three days. Quietude and sparing diet, unless there be very profuse discharge from a large wound, in which case generous keep becomes necessary, are always to be recommended; but bleeding and purging may usually be discarded as unnecessary and often injurious.

The Pleuro-Pneumonia Exudative.

BY DR. GEO. H. DADD.

Description.—The locality of pleuro-pneumonia exudative is within the chest, the parts affected are the lining membrane of the thoracic cavity and the thoracic viscera. The disease sometimes commences on the pleural membrane which is found on the interior walls of the chest and on the surface of the lungs—it then occasions much pain, as in common pleurisy, and is accompanied by a deep seated and painful cough; as the disease progresses the chest becomes the seat of exudation of serum and lymph, the walls of the chest acquire a coating of lymph which undergoes the usual change and becomes organized into tough fibrine, and this becomes so firmly united to the pleura, that it requires considerable force after death to tear it off; not only does it occupy the pleura-costalis, but is also found on the diaphragm. As the water—serum—lymph and fibrous tissue accumulates, it gradually compresses the lung, on whichever side the foreign materials happen to occur, until the lung itself, if unaffected by the disease, is forced up into the superior or upper region of the chest, and finally the mechanical pressure is so great that the lung is forced into a solid ball not bigger, in some cases, than a man's fist, and under such circumstances some persons are led to suppose that the lung is not to be found—"all gone."

It happens occasionally that while one side of the chest is filled up with serum, &c., the lung on the other side is filling up with exuded lymph, and is gradually undergoing solidification, so that after a while the lungs fail to eliminate carbonic acid gas from the blood and impart to it oxygen, and then the animal dies.

In some cases the disease first commences in a purely pulmonic form, affecting the substance of the lungs and then attacking the pleura; whenever it occurs in what is called a "high inflammatory form," it usually runs a rapid course and ends in mortification of the lungs; yet during my visits to North Brookfield I have not seen more than two cases of mortification of the lungs.

The disease sometimes occurs in the non-inflammatory form, and in character exudative, and lingers in the system for months, yet during this period it may escape ordinary observation, and the owner of the animal may declare that there is nothing amiss with the creature. Such was the case with a young bull, killed a short time ago, and the young cow also, two out of the three animals purchased at Belmont last June.

Very many of the animals slaughtered under the auspices of the surgeons employed by the commissioners had tumors in their lungs; these tumors consisted of portions of detached lung, circumscribed spots, in which the disease in its active form originally existed, some of these so called tumors weighed from one to twenty-four pounds! Whenever we found a tumor, it was always adherent to the chest, or rather the lining membrane of the same, and was enveloped in a dense fibrous covering or tunic, by which means nature preserved the integrity of the sound portion of the lung; the object in uniting the tumor with the pleura, is to organize it with arteries and veins, which are thrown out from the pleura, so that the diseased mass may be absorbed by the blood, and carried out of the system by the excrementitious vessels and organs; and it is in this way that nature by the silent operation of her own forces attempts, and finally very often succeeds in curing disease.

These diseased spots or tumors are detached from the sound part of the lung by what is called the ulcerative process, and as fast as ulceration proceeds, the adjacent parts are protected by deposits of fibrine which effectually seal up the open air cells and blood vessels, so that the tumor—*originally real lung tissue*—immediately escapes when the process is completed, and the part is cut into.

Occasionally we find the lung or a portion of one or both lobes in a state of hepatization, which signifies liver-like; there are two kinds of hepatization, one is called red, the other grey; on cutting through them they feel like liver, and when a portion is put into water it sinks.

Symptoms.—The old saying is that "in dry times all signs fail," so it is with exudative pleuro-pneumonia when it assumes a mild form. When it first appeared at Belmont, and afterwards at North Brookfield, it was in the acute form, and in spite of all treatment run a rapid course; its symptoms were then somewhat uniform—for example, it was ushered in by a short, dry, husky cough, and the animal on being urged to move showed symptoms of distress; the respirations were accelerated; the pulse quick and wiry; the animal dull and listless; the bowels constipated; the milk decreased in quantity and of a yellow tinge, and the appetite is not so good as usual.

Now the disease assumes a milder form, being

modified by passing through the systems of various herds, consequently the "signs fail," yet let the disease be in ever so mild a form the creature shows unthriftiness, appears dull and has a languid look; the hair in some parts of the body stands on end; the respirations are quickened, as well as the pulse, yet the appetite is not impaired; in fact there is no complaint made about an animal's appetite except when the disease commences in the form of pleurisy in which case very little food is eaten, and if the animal be pressed in the spaces between the ribs it shows signs of pain. It will generally be found that in the acute stage there is considerable tenderness all along the spine, and the moment a person's hand is placed in that vicinity the affected creature will shrink. The horns and extremities are alternately hot and cold; urine dark colored and scanty; feces darker than usual. Yet when the disease takes on the incipient form the work of destruction goes on in so mild a manner that it eludes detection, until auscultation or percussion reveals it.

Auscultation. — On applying the ear to the sides of the chest, if an uncommon sound be heard, such as a bellows murmur, or a strong tubular murmur, or a cracking sound, we may conclude that the lungs or their respiratory passages are diseased: also, should the respiratory murmur be absent, and on striking the sides of the chest a dense, almost solid sound be heard, then we may infer that the lung or lungs, as the case may be, are undergoing solidification. Let it be borne in mind, however, that the original and healthy sound should resemble that of the air entering into a vast number of minute cells—having, as each cell becomes gradually dilated, a soft, smooth, grating, or crepitating sound; the term vesicular has been applied to this sound, because it is supposed to be produced by the entrance of air into the pulmonary vesicles, and is very distinctly heard in the case of sound lungs where the walls of the chest are thinnest.

A compressed or solidified lung gives the walls of the bronchial tubes an increased power of vibrating sound, hence in such cases the ear of the auscultator detects what is called tubular respiration.

When a portion of lung is infiltrated or compressed, or when the chest contains serum, we get what is called *puerile* or shrill respiration on the side opposite to that affected, in fact whatever is capable of preventing the free access of air into the minute air-cells of one lung imposes additional labor on the other, hence the shrill sound or exaggeration of the respiratory murmur. When effusion into the chest is very great, or when the pleura becomes coated with lymph or fibrine, or the animal has a thick hide, or is very fat, then the respiratory murmur is feeble.

Percussion.—The application of percussion (striking various parts of the chest with the joints of the fingers) is sometimes of great value in detecting resonance or dullness of any part of the chest, yet when applied to the regions of the shoulder and along the back, which are covered with thick muscles, it is apt to fail in detecting disease. When we strike the walls of the chest, supposing the object to be free from disease, we get a clear sound, but as we approach the liver on the right side which reaches as far forward as the third or fourth rib, from behind, we get dullness. In many of the cases which I have had the privilege of inspecting at North Brookfield, I have on examination after death found the lungs in a state of hypertrophy (abnormally enlarged), and in all such cases the sound elicited by percussion resembled that which would arise on striking a boiled pudding contained in a bag; in fact the lungs when in a state of hypertrophy from this disease, ere they have lost their integrity of structure, feel almost like boiled pudding.

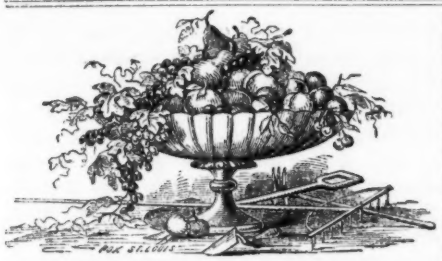
In pleuro-pneumonia the lungs are often emphysematous; this gives rise to a tympanic or windy sound, the lung is then unnaturally resonant—the extent of the resonance corresponds to that of the dilatation of the air-cells; on the other hand, should the lung be occupied by a tumor, such as I have just described, percussion will elicit diminution of clearness, and should the tumor have an adhesive connection with the inner wall of the chest, the dullness will be very marked, or rather the absence of sonorous sound is complete.

I have noticed that the autopsies reveal little, if any, derangement of other parts or organs of the body; and I have made up my mind, after conducting or assisting at over one hundred autopsies, that if any other organs of the body are affected the case is not "pleuro-pneumonia exudative," the veritable malady imported from Holland in May, 1859.—[*Am. Stock Journal.*

R. A. Alexander's Annual Sale of Short Horns.—The annual sale of Short Horn cattle took place at Woodburn Farm, June 13th, one week later than the sales in former years. Besides the usual number of bidders, residents in Kentucky, the following gentlemen made purchases of stock from other States, viz: Mr. Robbins, of Connecticut; Samuel Thorne, Mr. Cornell and Mr. Sheldon, of New York; Mr. Chaffee and Mr. Dunn, of Ohio; Mr. Meredith, of Indiana; Mr. Shields, of Missouri. The stock sold was better than that at the last year's sale, and brought better prices. Nineteen bulls were sold for the sum of $2,915, at prices from $50 to $360, averaging $153.42 per head.

Of cows and heifers, nineteen were sold for $2,747.50, at prices from $70 to $295, averaging $152.63 per head.

Stock.—"A merciful man is merciful to his beast." All who have charge of animals should recollect this. Show mercy to the poor brutes. Don't beat, whip and misuse them. Feed them well—see that they do not suffer for good water. Be kind to them. Never suffer yourself to become angry towards them because they don't do just as you would have them to. "He who governs his temper is greater than he who rules a city."



HORTICULTURAL.

American Pomological Society.

The eighth session of this Institution will be held in the city of Philadelphia, commencing on the 11th of September next, at 11 o'clock, A.M. and will be continued for several days.

This Society, the first national institution for the promotion of Pomological Science, was organized in the year 1848. Its sessions have brought together the most distinguished cultivators of our country; its transactions have embodied their various researches and ripest experience; and its Catalogue of Fruits has become the acknowledged standard of American Pomology.

Its example has created a general taste for this science, inspired pomologists with greater zeal, and called into existence many kindred associations. Its progress has been remarkable and gratifying, but it still has a great work to perform. Its general catalogue should, from time to time, be enlarged and perfected, and local catalogues formed, embracing the fruits adapted to each State and territory of the Union. The last of these suggestions was made by the Chairman of the General Fruit Committee, at the seventh session of the Society, in the year 1858. This has been carefully considered, and is deemed worthy of special attention. It is, therefore, earnestly recommended that each State Pomological, Horticultural, or Agricultural Society, charge its Fruit Committee with the duty of collecting information, and presenting the same, with descriptive lists of fruits adapted to their location.

The importance of this subject, and the increasing value of the fruit crop of the United States, call for a prompt and cordial response to this request—for a careful preparation of said lists, and for a full and able representation, at the approaching session, from all parts of the country.

The various State Committees of this Society are expected to submit accurate and full reports of the condition and progress of fruit culture within their limits, together with definite answers to each of the following questions. These reports, it is desirable, should be forwarded to the Chairman of the General Fruit Committee, Hon. Samuel Walker, Roxbury, Mass. if possible, as early as the 1st of September, or to Thomas W. Field, Esq. Secretary, Booklyn, New York.

What *six*, *twelve* and *twenty* varieties of the Apple are best adapted to an orchard of one hundred trees, for family use, and how many of each sort should it contain? What varieties, and how many of each, are best for an orchard of one thousand trees, designed to bear fruit for the market?

What *six* and *twelve* varieties of the Pear, are best for family use, on the Pear stock? What varieties on the Quince stock? What varieties, and how many of each of these are best adapted to a Pear orchard of one hundred or of one thousand trees?

What are the *six* and *twelve* best varieties of the Peach? What are the best varieties? and how many of each, are best adapted to a Peach orchard of one hundred or of one thousand trees?

Answers to these questions should be made from reliable experience, and with reference to the proximity or remoteness of the market.

Held, as this convention will be, in a city easily accessible from all parts of the country, it is anticipated that the coming session will be one of the most useful the Society has ever held. Societies, therefore, in every State and territory of the Union, and the Provinces of British America, are requested to send such number of delegates as they may choose to elect. Fruit Growers, Nurserymen, and all others interested in the art of Pomology, are invited to be present—to become members, and to take part in the deliberations of the Convention.

In order to increase as much as possible the interest of the occasion, members and delegates are requested to forward for Exhibition as large collections of fruit as practicable, including specimens of all the rare and valuable varieties grown in their respective districts, and esteemed worthy of notice; also, papers descriptive of their mode of cultivation—of diseases and insects injurious to vegetation—of remedies for the same, and to communicate whatever may aid in promoting the objects of the meeting.—Each contributor is requested to make out a complete list of his contributions, and present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable after its organization.

Societies will please transmit to the Secretary, at an early day, a list of the Delegates they have appointed.

Gentlemen desirous of becoming members can remit the admission fee to Thomas P. James, Esq., Treasurer, Philadelphia, who will furnish them with the Transactions of the Society.

Life Membership, twenty dollars; Biennial, two dollars.

Packages of Fruits may be addressed to Thos. P. James, 630 Market street, Philadelphia.

MARSHALL P. WILDER, President,
Boston, Mass.

Thomas W. Field, Secretary,
Brooklyn, New York.

"Never plant an orchard with the expectation of its thriving, unless you first prepare the land well, then plant well, stake well, fence well, and cultivate well—hoed crops are the best." "What is worth doing at all, is worth doing well," must always be borne in mind in the raising of fruit trees to anything like perfection.

Orchard Houses for Fruit Trees in Pots.

An experience of even twenty years will serve to convince the cultivator of fruit trees in America, that, if our seasons have not changed, there are difficulties now attending fruit growing that were unknown, or of comparatively rare occurrence previous to this period. Formerly peaches, plums, pears and apples could be grown in most parts of the United States in great perfection, and with tolerable certainty. Peach trees were known to flourish in a vigorous, healthy condition for forty years and yield abundant crops of delicious fruit, where now they can scarcely be made to live for half a dozen years. Pear trees, known to have been planted by the first settlers of some of our oldest towns, continued to bear abundant crops for upwards of a century, while apples as the standard fruit were abundant in every locality. Now, with enlarged experience in cultivation and increased care, these fruits can only be grown with difficulty: and in many localities where they once flourished they cannot be grown at all.

It is not our purpose to enter into an explanation of the cause or causes of this want of success in fruit growing, but merely to make some allusion to a mode of culture that seems to be gaining extensive favor in England, and may be adopted with advantage, in order to obviate the difficulties we have mentioned, in the United States.

Mr. Thomas Rivers, an extensive nurseryman and successful fruit grower of Sawbridgeworth, England, has adopted a plan, which has proved perfectly successful, of growing fruits under glass in pots. A description of the structures employed as orchard houses, the method of cultivation, and the success attending the enterprize, Mr. Rivers has given in a small manual published in England, which appears in the early numbers of the *Horticulturist*, for 1859.

These buildings are of the most simple and cheap construction, and may be built by any ordinary workman. They may be built with a double span roof, or they may be erected against a wall or board fence with a single shed roof.

When built independent of a wall or fence, the hight of the two sides as given by the author, is seven feet six inches in front, and three feet on the back side. As trees will make a more vigorous growth in our climate than in that of England, it would be advisable to extend the hight of the front and rear posts, say one or two feet. For the frame, posts are set in the ground two and a half feet; on the top of these posts plates of two inch plank are nailed on which the rafters rest for the support of the sashes forming the roof. British sheet glass of sixteen ounces, twelve by twenty inches, is used, and costs 2½d. or 3d. English per foot. The sides and ends are covered with ⅞ inch boards or plank, with long shutters, sliding horizontally in order to secure abundant ventilation. Estimates have been made according to American prices of materials and labor, which make the cost of an orchard house, thirty feet six inches long, and twelve feet six inches wide, and of the hight given above, amount to $70.27.

Mr. Rivers grows in these houses, peaches, apricots, nectarines, plums, pears, apples, grapes, strawberries, &c. The pots used are what are termed fifteen inch pots—that is, fifteen inches in diameter, and fifteen inches deep. For small growing trees pots eleven or thirteen inches diameter will answer.

In regard to plums, Mr. Rivers remarks: "After some years of experience, I have found the plum so easily grown in pots, that I feel a new era in their cultivation has arrived. I propose, that for those who wish to grow a regular and certain crop of plums without incurring a heavy expense, rough-built, lean-to orchard houses should be erected in some out-of-the-way corner of the premises, of rough boards, with two or three sliding shutters for ventilation—in fact, merely a glass-roofed shed on purpose for protecting plum trees in pots. * * * * They may be placed so close together, that a house twenty feet by twelve, with a path in the centre, will hold ninety-six trees, forty-eight on each border."

Speaking of nectarines, the author states that, "Thirty trees will give sixty dozen and upwards of fruit, when in full bearing. A small bush of the Pitmaston orange-nectarine, four years old, produced, one season, four dozen of fruit, and brought them all to perfection."

Of pears, he says: "In two or three years a well-managed tree will be able to give from eighteen to two dozen finely-grown fruit."

The almost fabulous prices which choice fruit now brings in New York and Boston, as well as in other large cities, will soon lead to extensive fruit growing under glass. Owing to the cheap manner in which these buildings may be erected, and the close and compact manner in which the trees may be trained, and the large number that may be accommodated under a single roof, and the certainty with which a full crop may be calculated on when well managed, will lead to their general adoption.

A writer in the *Horticulturist*, in commenting upon Mr. Rivers' enterprize, remarks: "The orchard house is the house for the million; the house for him who possesses a princely income, and him who toils for his daily bread. From

a magnificent building capable of growing all fruits, flowers and vegetables, down to a small pit for growing salads, strawberries, &c. The old notion of requiring large tracts of land for roots to ramble about in, will soon go to the shades, and the only thing that horticulture requires at the present day, is, to have amongst us good practical gardeners, who are good practical chemists."

Grape growing in cold houses has long been practiced successfully in the United States, and we have no doubt that when the matter becomes understood the various fruits we have named will be extensively and profitably grown, in the neighborhood of cities, and in the country, by those who are able and who can appreciate home grown fruit in perfection, as well as for the relaxation from business transactions, and as a source of pleasurable enjoyment.

[Written for the Valley Farmer.]

THE RASPBERRY.

BY CAREW SANDERS.

While we regard the strawberry as the chief of the small fruits, from its being the earliest fruit to come into bearing after planting, its cosmopolitan character, its enormous productiveness, ease of culture, and reliability; and last, though not least, its delicious qualities—yet the raspberry also has many claims on our attention, and should receive all the cultivation and skill that can be brought to bear on it, so as to bring it up to the standard of perfection, and, if possible, certainty of a crop of superior berries, to which the strawberry has attained. To this end we must undoubtedly look to the native seedlings principally, to obtain the hardiness and vigor of constitution necessary to enable the canes to withstand our winters, if possible, without injury.

Many native seedlings have been introduced, but they are mostly direct descendants of European kinds, and have not generally proved much hardier than their parents; and like them in that, and some other respects, have not grown generally popular or given entire satisfaction.

There is a large number of unknown, unnamed worthless varieties, distributed over the country, and much confusion exists as to the identity of certain familiarly named kinds; some claiming that certain habits, &c. characterize a certain variety, and others an entirely different character for the same. Doubtless there are many persons who think they have the thing entirely clear in their own minds, but there is a great difference in their views and opinions—hence the confusion.

The raspberry is a native of this country, both black and red; but the Black Cap and its varieties we consider out of the ring when choice fruit is desired, and to the improved and hardy varieties must we look for quality. The European varieties, as the Red Antwerp, &c. which are so fine at home, and even at the East, being doubtless suited to a cool temperate climate, are not only tender in the cane here, but will in some localities not fruit at all. We do not know that there are any of them hardy enough to be reliable, without laying down and protection. And yet, after all, we either have, or must have, some improved seedlings, which must partake of the quality and fruitfulness of the European varieties, combined with the hardiness of the American

Whether those named below are of this class or not, we will not say, but simply state facts concerning them.

The Kirtland Raspberry (said to be a seedling raised by Dr. Kirtland, of Cleveland,) we observe is gaining a good reputation elsewhere, and it certainly promises to become valuable here. We have had it in bearing three years, and, so far, it has proved perfectly hardy, and each year bore a fine crop of large red berries, of fair quality, tolerably firm, and well adapted for market or family use.

We think any raspberry cane that will withstand the severity and the vicissitudes of the past winter, without protection, may be classed hereafter as pretty hardy; and this the Kirtland and Allen have done with us, and have borne a good crop.

The Allen is decidedly a late variety. The berry is large, that is, broader and less conical and of a brighter red than the Kirtland. Both appear to be free, strong growers; the Allen the most so, and it may be objected to by some that it suckers too freely. These may be easily kept down in the garden, by the hoe, and in field culture by the plow and cultivator, by treating them as weeds. Better to have them so than such shy growers as the Brinkle's Orange is with us.

The Orange is a superb variety, but the universal complaint with it, is, that it bears itself to death, before it can get established. Yet we have seen enough to satisfy us that, when once established, it suckers and produces plants tolerably free; but it is too tender to be profitable.

The Everbearing varieties are fast becoming popular, and as they bear on the wood of the present year's growth, it is of less consequence that the canes should withstand the winter; for if killed, or cut down, they throw up their new canes with increased vigor.

Of these kinds by far the most reliable and productive is the Catawissa. It bears heavily, for nearly or quite three months. In fact, it produces fruit all the season, and in such quantities, too, as to make it a valuable acquisition. The Belle de Fontenay appears to be the best of the foreign everbearing sorts, but does not produce a succession of fruit all the fall, like the Catawissa, but only a single crop on the points of the new canes. The canes are remarkably strong and vigorous, the berries quite large, bright red, and handsome, but rather acid.

RAISING EVERGREENS FROM THE SEED.—Plant the seed in fine rich mold, covering them by sifting fine earth or mold over them to the depth of a-third of an inch—keep the soil constantly moist by shading, and if the seed are good and fresh, they will come up in a few days. The depth of planting must vary with the size of the seed. The young plants will need constant shading, at least the first season.

[Written for the Valley Farmer.]

WINE—EARLY GRAPE CULTURE.

Wine is the fermented juice of the grape, without the addition of sugar in any form whatever; for, when that is added, it becomes cordial, liquors, or whatever other name you wish to call it, except wine: to this name for the mixture we object. A grape to make wine like the finer wines of Europe, must contain sugar and tartaric acid in sufficient quantities to make it spirituous and vinous, but not strongly alcoholic; although the alcohol that is generated by the fermentation of grape sugar is not the same as that produced by the fermentation of cane sugar, and it does not produce the same effect upon the human system.

Taste is simple, but flavor is compound. Thus, by high flavor in the grape, we mean the combining of grape-sugar and tartaric acid along with that peculiar vinous aroma which belongs to the grape alone; and when we drink of its juice we taste what we smell, and both sets of organs which constitute those of tasting and smelling, are alike refreshed, invigorated, and delighted. The mouth is left cool and free from that acrid, biting sensation which is experienced when we partake of inferior grapes or wine.

Now, the question arises, Have we native grapes that will produce such wines? to which we must reply in the affirmative, for we have several varieties that have and will produce such wines. And to prove to you the truth of this assertion, we shall offer you one of the most agreeable arguments ever offered an intelligent set of judges. We offer it in the form of some wine made by Mr. Schneicke, of Cincinnati, who is one of the best wine makers in that city. These samples were made from the Delaware, Herbemont, Minor, Lincoln, Union Village, and Catawba grapes. They are all of them the pure juice of the grape, without the addition of any foreign substance.

The cultivation of the foreign grape was attempted by some of the first settlers of our Northern States, but they would not thrive, and after repeated failures grape culture was given up only to be occasionally revived by some enthusiast who thought he possessed a deeper knowledge of cultivation than those who had failed. But every attempt was only giving us another opportunity of recording another failure.

The settlers of some of the Southern States were more fortunate, for some of the varieties planted by them succeeded very well, and the seedlings from these are now to be found in great abundance in the extreme South and South West; although some of them have passed through many generations of seedlings, and the nature of the climate has changed them so much that the characteristics of their parentage are almost obliterated; yet enough remains to show that the stock from which they sprang was a foreign one.

Soms of the seedlings of these foreign varieties are successfully grown in some localities in our own Northern States, the best of which are the Herbemont, Lenoir and Elsingburg.

M. Herbemont, a Frenchman, went to Columbia, S. C. about 1812, and there commenced experiments in cultivating grapes for wine, which were conducted on a large scale and with a perseverance worthy of success; and had he possessed the grape upon which to found a substantial basis, he would have succeeded. After a great variety of experiments he hit upon the grape now called the Herbemont; from this he made a really excellent wine. His location was none of the best, and for the want of money to build cellars for storing his wines, and other apparatus connected with wine working, he practically failed; but he was evidently on the verge of success when he died, and there were none to take his place.

Many other attempts were made by other persons in different parts of the country, but for some cause they nearly all failed. Mr. Longworth, of Cincinnati, took hold of it with a will, and what is more, capital, and with both combined he has been successful; and we must certainly give him the credit of proving to the world that good wine can be made in the Northern States, and that, too, from native grapes.

When the Catawba grape (which has been the foundation of success in wine making in Cincinnati) was introduced, we had not only a far better grape for the North, but it also gave us a better notion of the refreshment which grapes can afford, and was suggestive of *wine*, which can scarcely be said of the Isabella and many other varieties which we had previously cultivated. Although the cultivation of the Catawba for wine has been eminently successful, yet we think we may safely say that we now possess other varieties which are far superior to it for that purpose, and will supersede it.

It cannot be expected that every one who plants vineyards will succeed: for perhaps there is no branch of horticulture which is so little understood as that of grape culture, and the portion of it from which the most failures will spring, is that of pruning. The system generally adopted is the no system, or letting Nature take her own way. Now, this ought not to be, for the grape to succeed must be pruned annually, and some judicious system adopted at the commencement and rigorously followed.

Setting Strawberry Plants.—The present season, like former seasons, has brought to notice some new varieties of the strawberry that some may be anxious to procure. Dealers some times recommend fall planting, but we have seldom found new runners set the same season to do much unless extraordinary care is taken with them. If we should meet with a new and excellent variety of the strawberry, and could procure a few plants late in summer or fall when they could not as well be had in spring we might be induced to plant them, for the sake of obtaining the variety. But where a plantation of any considerable extent is to be made nothing is gained by fall planting. The roots get but poorly established before winter, and no prominent runners are formed, the ground is exposed naked

to the beating rains of winter, and in spring it becomes baked so hard that a bed set at a proper time in spring will be in a better condition and will produce better and larger crops the following season, than if set the fall previous. For successful planting, let the ground, during summer be well worked, and encourage all the seeds of weeds, &c. that it contains to vegetate, that they may all be destroyed before planting in spring. Spring planting, with proper care and culture through the summer will give an abundance of strong runners that will yield a full crop the following season.

[Written for the Valley Farmer.]

HORTICULTURAL NOTES AND GLEANINGS.

BY CAREW SANDERS.

The New Japan Pinks—Dianthus Heddiwigi and Dianthus Lasciniatus.—The family *Dianthus* affords us time honored memorials of the garden. The old, but well known *Sweet William*, the *Pink, Carnation, and Picotee*, with their congeners the Chinese and Indian Pinks all belong to the genus Dianthus, and are among the oldest, the sweetest, and the handsomest of garden flowers. Some of the industrious cultivators of Europe have now produced some varieties of the Chinese, or Japan section, that surpass all others, and are exciting a great deal of interest, both in this country and in Europe; and as they must become very popular with all, from their great beauty and ease of culture, we call the attention of our flower-loving readers to the description of them, copied from the *Illustrated Boquet:*

In its growth Dianthus Heddiwigi forms a neat compact plant, growing from thirteen to sixteen inches high, and by good cultivation branching freely at the base. In some specimens the stems are of an uniform purple tint, while in others they are deep green; the leaves are linear oblong; the numerous flowers are terminal, borne singly on the branches of the stem, are single, and from two to three and a half inches in diameter, close, compact, five-petaled, and salver-like, with fringed margins. The predominant color is crimson, varying in the richest conceivable shades and varieties, some plants producing self-colored, others part-colored flowers, the former vieing with the finest dark velvet and damask tints, and these seem gradually blending, in others, with rich carmine and violet crimson; the centre of each flower is picturesquely marked with a broad radiating dark zone or ring, the rich velvety colors of which are exquisitely relieved by the central silver-gray anthers.

It is easily cultivated; the plants thrive luxuriantly in any garden soil, or in a compost of friable loam and leaf mold, with a little sand. Seeds sown in autumn, and wintered in a cool greenhouse or frame, will produce plants which will flower when turned into the ground in summer; and seeds sown in spring will form a succession to bloom all the autumn and early part of winter in the house. They are called, certainly the greatest acquisition of recent date.

Dianthus Lasciniatus, Cut-Leaved Japan Pink.—This is another of the magnificent Japan Pinks derived from the same source as the *Dianthus Heddiwigi*, and distinguished from it by its taller growth, rather large leaf-joints, and its remarkably large and superb flowers, which are from three to four inches in diameter. It produces single and double blossomed varieties. The petals have large lascinated teeth, like fringes at the margins, from half an inch to an inch in depth, which are very elegant and produce a fine appearance. The colors vary from pure white and carmine rose, to brilliant shades of dark crimson, with radiating zones or belts of richer hue towards the centre. The seedling varieties also include rich self, crimson and meroon tints in higher and lower degrees of maturity. The light colored ones are at times finely stained with rose and violet-crimson, whilst the dark ones are rendered very effective by mottled veins and streaks of white.

It is cultivated the same way as the *Dianthus Heddiwigi*. Seeds sown in March or April, and the plants put out into the open ground will bloom magnificently all the summer and autumn: making with the former, one of the most effective and gorgeous displays in the garden. In pot culture, the soil should be good loam and leaf-mold, with an admixture of sand.

We have no hesitation in saying that the above described beautiful objects will succeed well in our climate with little care or trouble, and abundantly reward the amateur with a brilliant display of gorgeous flowers.

Farfugium Grande.—Is a new herbaceous plant, with magnificent foliage, peculiarly marked and variegated, hitherto treated as a greenhouse plant; but Mr. Buchanan, nurseryman, New York, states that "it will withstand our most rigorous winters without protection." This must render it highly valuable.

A NEW MAMMOTH STRAWBERRY.

The *Gardener's Monthly*, for July, gives a colored lithograph of a monster strawberry, called the Wizard of the North; "not so much, [it says], because we think it will be well adapted to our climate, but to show the size the strawberry has attained in England."

"It is said to be the largest variety ever grown, and was raised from seed by John Robertson, of Linside, in 1853, first fruited in 1855, and exhibited before the Paisley Horticultural Society, July 16th, 1857, where it was awarded the first prize.

A single plant shown at that time yielded seventy berries, many of them of monstrous size, the largest being 9½ inches in circumference, though planted only fifteen months.

It is rather acid, very much resembling the Wilson's Albany in this respect."

This must eclipse "The great Austin Shaker Seedling Strawberry," which was "believed to be the largest strawberry in the world," the size of whose berries are not claimed to be over two inches in diameter, which would only give six inches in circumference. What are we coming to, though? Strawberries as big as apples, and can be had as plenty as blackberries. This great strawberry will soon be on this side the

Atlantic. But whether we can grow it as large, remains to be tried.

PHLOXES.

The glory of the flower garden now, is those fine hardy perennial flowers, the Phlox. The genus or family is "native-to-the-manor-born," consequently they revel in our climate. They are hardy, of course, require little care, are not particular as to soil, and will thrive almost anywhere. They do not embrace so great variety of colors as some families of plants do, red and white being the base, to which the florist has added all the intermediate shades and tints, with curious markings, &c., besides enlarging the flower, and creating a greater profusion of bloom. At all events they may be seen at this season in masses of bloom, making a showy appearance indeed.

We will give a list of some of the best varieties in a future number.

New Hardy Shrub—Eleagnus Parvifolia.—The *Gardener's Monthly* says: "We have recently seen a specimen of this charming plant, which has been out in the open air near Philadelphia, two years, without the slightest injury. When we saw it in May, it was about four feet high, forming a dense bush with silvery buffalo-berry-like leaves, and covered with thousands of white blossoms as fragrant as the sweetest Jessamine. We are informed that these are succeeded by large scarlet berries in August, and must have a delightful effect."

It is a native of Neapal.

THE KIRTLAND RASPBERRY.

In our variable climate, particularly in the West and South-west, it is difficult to grow any of the best varieties of the raspberry without winter protection to the vines. The imported kinds prove quite too tender in our fickle climate. We had some hope that the choice seedling, the "Brinckle," would prove sufficiently hardy to go through our winters, but this it does not always do; a good variety, then, equal to the Hudson River Antwerp, is a valuable acquisition—this we believe we have in the Kirtland. It is of good quality, productive, and as hardy as the native Black.

The history of this fruit is somewhat involved in mystery. It was found or received among some plants from the garden of Prof. Kirtland, near Cleveland, Ohio. It is probably a chance seedling that came up in his grounds, and falling into good ground it has been propagated, and the grower deeming it due to Prof. K. has given it his name.

The color of the fruit is a rich red, and as a market fruit it has all the necessary firmness for safe transportation. We hope to see this, or some other variety equally good, take the place of the common Black, which we hardly deem worth the room in the garden. The Purple Raspberry, sometimes called the English, is a vigorous grower and far superior to the Black, while it is nearly equally hardy. We want a good supply of native hardy seedlings. Half the efforts that have been made to produce new strawberries would give us choice varieties.

THE LACE-LEAF PLANT.

This beautiful plant is an inhabitant of the water, and is one of the most curious and attractive objects that belongs to the vegetable kingdom. The full grown plant extends its leaves, forming a circle two or three feet in diameter.—Each leaf rises from the crown of the root, like a short, delicate, pale green or yellow fibre, gradually unfolding its feathery sides, and increasing in size as it spreads beneath the water. The color is bright green, and the whole leaf looks as if composed of fine tendrils, wrought after a most regular pattern, so as to resemble a piece of light green lace or open needlework.—The leaves as exhibited in transparent water, present every degree of development, as it regards brightness and variation of size and color. Nor is it less interesting to notice that these slender and fragile structures, apparently not more substantial than gossamer, and flexile as a feather, still possess a tenacity and wiriness which allows the delicate leaf to be raised by the hand to the surface of the water without injury. Sir William J. Hooker remarks, in giving an account of the plant: "We shall be surprised if all who are interested in horticulture do not possess themselves of so curious and beautiful an object. Being entirely aquatic, the leaves even submerged, we cannot doubt but it may be cultivated in glass aquariæ, and even in a glass jar placed in the drawing-room, as is done with the *Vallineria Spiralis*, &c."

Lawns.—Frequent mowing is one of the main features in keeping a lawn, and no fine lawn can be maintained unless this is attended to. It matters not how much trouble and expense may have been incurred in its formation, if allowed to grow, the stronger foliaged grasses and clover will eventually smother all the finer kinds; annual grasses then gain a footing, and when winter approaches, the lawn is many removes from being "a thing of beauty." On the contrary, we have seen many fine lawns that had no particular care bestowed upon their preparation, rendered close and smooth by frequent cutting and rolling. One of the most ruinous practices, is that of attempting to take a crop of hay from the first growth of the season: such a course will destroy the finest lawn. It is the grand secret in lawn keeping to mow very early and very frequently in the spring. At this period the coarse grasses soon spread and monopolize

the surface; and when these are left unmolested even for a few weeks, before mowing, the lawn is partially destroyed for the season. Early mowing allows the finer grasses an opportunity to develop; frequent cutting causes the plants to spread and thicken, a close compact surface of grass is formed, which stands the hot summer suns, when under the opposite management it would be all but burned up.

Grafting the Cherry—New Views.

M. L. Dunlap editor of the *Illinois Farmer* writes as follows on this subject:

"Downing says, 'that grafting commences earliest with cherry and plum, and ends with the pear and apple. The precise time, of course, varies with the season and climate, but it is generally comprised from February to the middle of April.'

That so close observers as the brothers Downing should write so loose a paragraph, on such an important subject, we are at a loss to determine, and conclude that grafting is not well understood in New York, or that budding is more popular. Grafting the cherry is so little resorted to there that we may take a little of both conclusions.

On the prairies the newly set buds of the cherry are liable to be winter killed, more especially on the Mahaleb and Mazzard stocks, which are often killed to the ground, bud and all; at the same time the Morello presents a hardy stock for us, though, it must be confessed, with the bad habit of sending up suckers; but with deep tillage and deep planting, this will, to some extent, be avoided.

Grafting the same year as Transplanting.—To do this with the cherry, the trees should be taken up early in spring, before the swelling of the buds, the branches trimmed off and top cut back to within four or five inches of where the head is to be inserted. They are then to be planted in orchard or nursery rows, to be grafted as soon as the buds are ready to break and until the leaf is half grown, of course the top is cut back four or five inches as before noted. This is the season of grafting. The scions should have been cut in the fall or winter and kept in some cool place, so that they shall not have materially swelled their buds. If the stock is half or three-fourths of an inch in diameter, we cut it off at an angle of forty-five degrees, square off the upper part of the cut, and insert as in cleft grafting, with this difference, that the knife is held at an angle so as to cut instead of splitting the bark; but when the stock is of less size, we make the usual splice graft, but without the tongue, simply putting them together and winding with linen thread; for this purpose the thread is cut in lengths of sixteen to eighteen inches. The graft is then protected by melted wax, put on with a brush in the usual way. So soon as the growth indicates that the thread will cut into the bark, cutting down through the thread, even into the wood, will do no harm, but the thread should not be removed, as the wax will hold it so as to protect the graft from blowing off until it is firmly knit to the stock.

Grafting the next Season after Transplanting.—The trees to be grafted, if of good size, say one-half to an inch or more in diameter, must not have their side branches cut back at the time of grafting, but are to be shortened in as the graft is capable of absorbing the sap. Those suitable for splice grafting, can be safely pruned at the time. We think the fault in grafting the cherry has been mainly in doing the work before active growth, and which resulted in the loss of the graft.

Grafting the cherry and plum, even after they are in bloom, is much safer than doing it too early. The caution to be observed in rooted trees, is not to cut away too much of the top at once, but in the case of the newly transplanted tree, it has been deprived of its vigor and the growth checked, hence it is not safe to set the graft until the growth is resumed sufficient to act on the graft. No buds or sprouts should be rubbed or cut from the tree the first season after transplanting."

FORM OF VARIOUS TREES.

From a Committee of the Cincinnati Horticultural Society.

In ascertaining the habits of growth of various trees of the several popular varieties of apples that are largely cultivated in the neighborhood of Cincinnati, we have taken our own experience as a starting point, and then added to this such additional information as we have been able to obtain from other members of this Society. The result of our labors is the following classification:

Of an Upright Conical Growth.—Benoni, Early Strawberry, Golden Russet, Early Sweet Bough, Lady Apple, Pryor's Red, Northern Spy, Talman's Sweeting.

Of an Upright Growth, but with a Round Head.—Red Astrachan, White Pippin, Alexander Kaighn's Spitzenberg, Michael Henry Pippin, Drop D'or, Bohannan, Belmont, Rawles' Janette, Fall Wine, Rambo, Rome Beauty, Summer Rose, High Top Sweet, Myer's Nonpareil, Fall Pippin, and Porter.

With Spreading Limbs, and Round Head.—Smith's Cider, Maiden Blush, Baldwin, Roxbury Russet, Newton Pippin, Tulpehocken, Winesap, Broadwell's Sweet, Gravenstein, Jersey Sweeting, Hubbardstown Nonsuch, Belmont, Vandevere.

Of a Drooping, Pendant Form—Head Symmetrical.—Yellow Bellefleur, Pennock, Rhode Island Greening, Newark Pippin, and Fall Pippin.

Of a Pendant, Drooping Form—Head Loose or Straggling and Open.—Ortley, White Winter, Pearmain, and Newton Spitzenberg.

Of the above we would particularly refer to Smith's Cider, Yellow Bellefleur, White Pippin, Rome Beauty, and Rawle's Janette as trees of a marked vigorous growth and healthy, hearty habit. The Benoni, Winesap, and Summer Rose are of only moderate growth, but appear perfectly hardy.

The Early Sweet Bough, Newton Pippin and Ortley (or White Bellefleur) appear to possess a

less vigorous and a somewhat unhealthy constitution.

Pomological Notes. — *Stoever Raspberry.*— The *Horticulturist* says, this berry was found growing wild in August, near Lake Dunnion in Vermont, by Jefferson F. Stoever, and removed to his garden near Philadelphia, where it fruited in 1859. Dr. Brinkle thinks it will probably be better adapted to the exigencies of our climate than most of the large varieties. The berry is very large, full three-quarters of an inch long, by one-eighth of an inch wide; roundish, conical in form; of a rich crimson color and good flavor.

The Prinz Apple.—The *Gardener's Monthly* says: "Few fruits reached us the past season, that gave us more pleasure to look at, and to eat, than an apple under this name. Second to very few in quality, it is the most beautiful kind we know." It is from Germany, and is said to be one of three favorites among all apples there. Mr. Waage, of Montgomery county, Pa. has had it in bearing eight years, and every year loaded with its handsome fruit. It is thus described:— "Fruit of the largest size, roundish, ovate, slightly conic, occasionally somewhat angled, rather tapering towards the crown; skin yellowish green, with occasional brown dots, on the sunny side of a deep crimson blush; stalk short, rather thick, deeply inserted; calyx closed in an irregular, somewhat ribbed basin; flesh greenish white, juicy, firm for a large apple, with a pleasant sub-acid flavor, quality very good. A very handsome, showy apple."

[From the Cultivator and Country Gentleman.]

Strawberries at Chicago.—At last Chicago has begun to grow her own small fruits with a will, and the "Wilson" has the honor of being conspicuous among the number of kinds grown. For the first time here has this berry come into bearing in sufficient quantities to leave its mark, and it has done so, distancing by long odds all other kinds. We have seen good "Hovey" here from Cleveland, and Early Scarlet, the hitherto recognized great berry of the West.—the latter in large quantities, along with other kinds usually grown. But if you want to see the finest berries, or those commanding the *greatest* price —the important point to market men—the "Wilson's Albany" is that berry. The wholesale rate of the picked berries of this fruit has been from $4 to $7, and even $8 per bushel, retailing at from fifteen to thirty cents the quart. Immense quantities of ordinary berries have been sold at a dime a quart, and in some cases even less. We know of one man who planted 80,000 Wilsons here this spring, and he an old Albanian—another who has had about an acre in full bearing, has got a large breadth for another year, and is preparing for an eighteen acre patch; this, too, having the advantage of hydrant water to an unlimited extent, by which the size of the berries can be maintained to the last. This last person has trenched his land and manured immensely, and certainly it looks as though this heavy outlay will pay. He too, has had the Early Scarlet in bearing, and has planted a large patch of the same this spring, but tells the writer he shall plow them under, even though they would next year be in their prime. I suggested the getting off next year's crop, but his answer was—"*I cannot sell them* when my Wilsons are in. He, too, has the "Hooker." In flavor it is certainly fine, but does not begin to equal the Wilson in productiveness, or carriage to a distant market without injury. Edgar Sanders.

Chicago, Ill.

How to Grow Peaches Every Year. — A correspondent of the *Ohio Cultivator* says: — "Procure your trees grafted upon the wild plum stock. The tree partakes of the nature of the plum, being hardy, and will never winter-kill, and putting out late in the spring, will never be injured by the frost, and it is a certain preventative against the workings of the peach grub, while the natural lifetime of the tree is longer than that of our own; so you may depend upon peaches every year, and for a long period of time, without the destructive and discouraging influences attending the growth of the common peach. They can be obtained at from fifty to seventy-five cents per tree, and you had better pay five times that amount, than not to obtain them, and be certain of peaches every year. Try it, and our word for it, you will be satisfied with the result."

Biennials and Perennials.—The following will answer several inquiries about the nature of biennials and perennials.

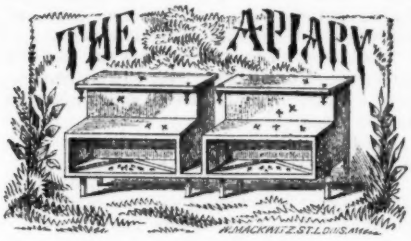
Biennials, speaking in a general sense, are sown one summer, and bloom and die the next, as soon as they have ripened their seeds. Most of them are hardy enough to stand our winters, for one summer is not enough to complete their growth, even with the help of the hot-house, green-house, or frame. Many stocks are biennial; the Canterbury Bell is a biennial, and if sown about June, and planted out when large enough, will flower about the same time next year.

Perennials are plants which do not die at any given period, but would live on like an oak or vine, if the necessary conditions could be supplied; and the great family of plants comprises most of this kind.

Hardy perennials will grow many years in the same spot, and spread into large masses. Bulbs increase in number. Fibrous and tuberous rooted subjects spread out into many plants all round, and only want to be separated from the parent. Many of them separate themselves, and when they degenerate it is from remaining too long in the same spot of soil, which they in time exhaust.

Stove perennials, cultivated in pots, are from time to time shifted from one sized pot to another, and new soil is filled up all round the old ball of earth, and the plant continues to grow so long as this can be done.

☞Save the seeds of flowers, garden vegetables, &c. as they ripen. Select the lowest and best pods, and put them away to dry, marked.



[Written for the Valley Farmer.]

HINTS FOR THE MONTH.

BY J. W. QUINBY.

After taking surplus honey from the hive, care is necessary in two respects—to keep out the worms and prevent it from souring. In regard to the latter, if boxes containing unsealed cells should be placed in a damp cellar or other apartment, the honey exposed to the air would become thin and in a little time, acid.—To guard against this, let it be kept in a dry atmosphere. There is less danger, however, from this tendency to sour, than from the liability to be attacked by worms. It will not do to simply exclude the miller with a view to keep these out, for it has been satisfactorily demonstrated that this is insufficient. It is impossible to say how the eggs are introduced, but this must be done by some means, or we must admit the theory of spontaneous generation. Some have thought that the eggs of the moth, being deposited around the entrance of the hive, are accidentally caught up by the passing bees and are detached in the same manner in the boxes. In view of the facts no other theory appears more reasonable. If boxes are taken off late in the season and kept at a low temperature, the worms are not likely to appear. Should they, however, the first indication will be a fine white dust, like flour on the comb or bottom of the box. In a little time a thread-like trail of white silk is seen on the surface of the cards of honey—the worm feeding on wax and not penetrating deeply—which gradually enlarges with the growth of the larva. This is the entrenchment of the enemy and a sure indication of his presence. With its first appearance, the combs should be thoroughly treated with sulphur fumes. To do this obtain a tight barrel or box; put in the honey to be smoked, leaving space for a small dish containing sulphur matches; fire the matches; close up the apertures, and let the apparatus stand for two or three hours. At the end of this time, the worms will probably have been destroyed. It is not certain that this treatment will affect the eggs of the moth that may remain in the combs; but if the worms re-appear the process must be repeated. The matches mentioned may readily be made by dipping slips of paper in melted sulphur. A little experience may be necessary to adjust the quantity of brimstone to the number of boxes; if too little is used the worms will not be killed—if too much the combs will be discolored.

Sometimes bees will swarm in August or during the season of buckwheat. These swarms are usually small and of little value. When practicable let two or more be united, but not if more than thirty hours intervene between them, as the strongest party would be likely to destroy the others in such a case. If fighting should commence between swarms thus put together, it may frequently be ended by freely blowing tobacco smoke among them.

When bees have swarmed excessively, as they will sometimes do, thus leaving their combs unprotected, they are liable to suffer from the worm. Care should be taken of such with reference to this point, closing up all unnecessary passages, making close joints, destroying such worms as may be accessible, and so forth. Some distribute shallow dishes of sweetened water through the apiary on a warm summer evening, by which millers are attracted by the hundred, are intoxicated and drowned.

But be not frightened at the stories you may hear of the ravages of the bee-moth. The impression that she is a deadly enemy to the honey bee is in great part unfounded. This insect bears a relation to unguarded honey-combs similar to that which the flesh-fly sustains to putrid flesh. As soon as the hive is weak from any cause, she is ready to enter and deposit her eggs. These soon hatch from the heat of the hive, and the worms being discovered as they commence their destructive work in the combs, the enfeebled condition of the colony is unjustly attributed to them. Thus it is seen, that the bee-moth is not the primary cause, but merely an auxiliary, aiding decay previously begun. The moth, herself, is extremely averse to coming in contact with a honey bee, and will dart quickly away on the approach of one; therefore, it is not probable that she ever enters a hive that is well guarded by bees. Let strong colonies, then, be our protection against this pest—in fact, bee-keepers should make it a point to keep such only. If by any chance a worm is introduced into such an one, his quarters are involuntarily but speedily changed.

St. Johnsville, 1860.

Artificial Honey Combs.—Some ingenious beeman in Germany has invented a method of making artificial honey-comb, which he puts into hives in which new swarms of bees are to be put. This is found to be quite an improvement. The bees find their new quarters already partly filled with unfinished comb, and they soon finish it up and fill it with honey. Thus both time and labor are saved to the bee, and he is made to return honey in less time than if such a start had not been given him.

We learn from a paragraph in the "Ohio Farmer," communicated to that paper by Prof. Kirkland, that a Mr. J. N. Hoag, in California, has successfully manufactured this species of comb, and introduced it to his bees with manifest advantage. It is done by melting down pure beeswax, which is then run into molds to make it thin and smooth, like window glass. When cooled, it is stamped, or embossed, into the exact shape of the partition which separates the double rows of cells in the comb. He does not make the entire comb, but merely the groundwork, and it is done in such perfection that when placed in the hive the bees accept it as their own work and erect their six-sided cells upon it with the utmost alacrity."

Bees—to Destroy Millers or Bee Moths.—A correspondent of the New York "Evening Post" gave last year an account of his success with a plan which he adopted for the destruction of millers or bee-moths, as follows: When the season arrived, I put out a white plate, containing a mixture of molasses and vinegar well stirred up together. This I continued through all the warm nights of latter part of July and forepart of August, setting the plate at night on a level with the bottom of a hive and near to it, and removing it in the morning. My success was complete. I counted each morning the number of millers caught during the night in the liquid on the plate, and in three or four weeks I trapped and killed one thousand. They do not fly much except in very warm nights, and seem to discontinue their operations about the middle of August. I mention these facts for the benefit of those who keep bees, and I have strong hopes, that by adopting and making a thorough trial of this trapping system, the depredations of the millers may be arrested, and that they may be finally banished from the apiary.

[Written for the Valley Farmer.]

The Natural History of the Old Fogy.

The old fogy is a very curious specimen of the genus homo. His natural history has never been fully written out; and, if it were, it would fill a volume. He is found in all sections of our country, and engaged in nearly all occupations. As his name indicates, he is old, and it is a curious fact that no decidedly young specimen has ever been found. He is the antipodes of Young America, and a constant war of words, ridicule, and obloquy is carried on between the two factions, much to the amusement of Young America and the annoyance and chagrin of the Old Fogies.

The Old Fogy is not always easily recognized except by the *expert*. It is doubted whether any one invariable rule has been found by which he may always be known. Some are of opinion that he may always be known by his diet. They hold that among all animals the character of the diet has a great influence on the character of the animal. The more refined the diet, the more refined, intelligent, and acute the animal; and if the principal food be gross, the animal will be gross and less elevated in character. They think that the Old Fogy may be known by his habit of eating swine's flesh three times a-day, in other words, making it his principal meat. It is true that swine's flesh has been proven, both by science and actual experiment, to be among the most gross of all articles used as human food. It requires a stronger digestive apparatus, and more time for its digestion than other varieties of meat. It is less easily assimilated to the human system, and contains really less of the elements necessary to create the highest degree of mental and physical vigor. Eating swine's flesh, to the exclusion of better meats, although doubtless strongly indicative of Old Fogyism, cannot be taken as an invariable rule.

The Old Fogy is distinguished by characteristics varying somewhat according to the business he follows. If he is a physician, he probably gives calomel and quinine by the teaspoonful, following in the footsteps of his illustrious predecessors. He is particularly *down on* new remedies and new-fangled notions.

The Old Fogy teacher has marked peculiarities. They are well illustrated in the following dialogue between one of that class and a school trustee. It may be found, substantially, in the *Southern Teacher*. The teacher enters, and seating himself, with his hat on his head and a quid of tobacco in his mouth, the conversation begins.

Teacher.—"They tell me you are one of the new trustees, and I have called to let you know that I would like to teach your school this term."

Trustee.—"Well, we wish to employ a good teacher. Have you ever taught before?"

Teacher.—"O, yes, I have *teached* school three terms, and I understand the business. I can whip any boy, no matter how big he is."

Trustee.—"Yes, but we want a teacher more than a whipper. Have you ever attended a normal school?"

Teacher.—"No, I don't believe in such schools. I never saw one, and hope I never shall. I think nat'ral teachers are the best, and I am of that class."

Trustee.—"Have you ever attended a Teacher's Institute, or teacher's meeting?"

Teacher.—"No, and I never intend to. If I can't keep school without their aid, I'll give up and return to my old business of sawing wood. They may do very well for beginners, but they won't answer for me."

Trustee.—Then you don't believe in the old maxim, "never too late to learn."

Teacher.—"Not quite. When a man knows a thing, he knows it, and that's enough. I know how to keep school, and I don't want to hear of any of the new-fangled notions."

Trustee.—"Do you take or read any of the school journals?"

Teacher.—"Not I. I have no dollar to throw away on such trash. When I can get plenty of stories about murder, love and shipwreck, I don't want to see any of your teacher's journals. I never read a page of one in my life; and what is more, I don't mean to."

Trustee.—"Do you own or read any works on education?"

Teacher.—"No, I have no inclination to read such works. What's the use when one knows it all? If you want me to teach your school I am ready to do the work as cheap as any other man."

Trustee.—"I am not prepared to employ you now. If I should decide to need your *valuable* services, I will inform you."

Teacher.—"Well, I shall expect to hear from you." (Exit.)

Trustee (alone).—"Long enough have we suffered from such teachers, and I am truly thankful that it is within my power to preserve the children from another specimen of the same class."

That trustee was not an Old Fogy, if he had been, the teacher would have suited him exactly.

There is a much larger proportion of Old Fogies among farmers, probably, than among any other class, and here they are readily distinguished. One mark, is his wood pile, which is situated often in the public way, upon a mound of chips, the accumulation of years. It is seldom composed of more than one load or jag, generally half rotten or green and easy to chop. Not more than enough for the day's use may be seen fitted for the fire, seldom enough to last over Sunday. Such a thing as a wood-

house well-filled with dry seasoned wood, the owner has never dreamed of. He has heard it said by some of his neighbors, who are always full of new-fangled notions, that such an institution, convenient to the kitchen, is in every sense of the word economical, a saving of wood and labor, but your Old Fogy is not to be drawn into any such folly.

The water for the family is generally brought from a spring, a distance from the house of one hundred yards or quarter of a mile. It is too much trouble and expense to make a well or a cistern, and consequently time enough is consumed in carrying water each year to build two or three wells or cisterns.

We might allude to his practice of allowing his cows to run at large; the time spent in hunting them and driving them home; the frequent injury to the cows; the loss to the farm in manure; or to the number of worthless, ill-bred cows which he keeps; but it is needless, the same rule follows through all his operations.

He has a special contempt for agricultural and horticultural societies, and agricultural papers. He understands his business, he knows enough to make a living now, and he is not going to be made a fool of by any such new-fangled notions. His father got along very well without any such thing, and so can he. He seems to think that there is nothing more to be learnt in farming. He will admit that there have been improvements in nearly everything else, but by his rule farming is the only business which was ever brought to perfection. If there is any one rule by which the Old Fogy may certainly be known, it is his *anxiety of mind* about new-fangled notions.

Under the impression that there might be a constitutional difference between Old Fogies and other people, a dissection of one has been made with the following results:

On cutting through the skin, it was found to be exceedingly thick, proving that he belongs to the genus pachydermata, or thick-skinned animals. The jests and jeers, and squibs and darts of his more progressive neighbors had evidently proved harmless, never penetrating his thick skin, but only leaving a superficial scar. On examining the brain it was found that instead of two coverings, the dura mater and pia mater, as in other people, it had but one covering, the dura mater, so remarkably thick and hard as to have rendered it impossible for any new idea ever to have entered the brain. That part of the brain which is the seat of veneration for parents was largely developed, which seemed to account for the practice of the individual during life of carrying his grist in one end of the sack and a stone in the other to balance it, as his father and grandfather had done before him.

The most singular part of this subject was the heart, or rather what occupied the place of the heart, but which looked more like a large gizzard than a heart. On cutting open this most singular heart, if it may be so called, it was found that the main portion of it was very hard and dense in its structure, having no opening like other hearts, but containing in its very centre a small hard substance, which, on carefully unraveling it, proved to be a substance resembling parchment, and having engraved on it this singular motto, "NUMBER ONE IS THE BIGGEST FIGURE IN ARITHMETIC." On inquiring of the character of the individual among his acquaintances the invariable reply was, that he always looked out for number one, which is the only clue found to the strange motto of his heart. One small portion of the heart, the extreme inferior portion, was found to be somewhat soft and pliable. Considerable curiosity was manifested to ascertain the quality and use of this part. On opening it, and placing it under a powerful magnifying glass, some distinct traces of the milk of human kindness were discovered, but so nearly dried up as to be imperceptible to the naked eye.

Some further interesting investigations were made, but the length of this paper will forbid their detail at present.

[Written for the Valley Farmer.]

A BAD TEMPER.

What shall be done with a bad temper? This question is to be answered in two ways: If the temper is in yourself, regard it as a morbid mental condition, a kind of disease, which should be cured at once. Think of yourself always as unsound—as being in a chronic fever. And this very thought will help you to see your frailty and help you to overcome it. When one can see himself as he is, he is in a good state of mind. The inebriate that sees his danger is in a hopeful state. The liar that realizes his falsehood is in a fair way to mend his ways. So he who knows his temper is bad, will seek to cool and cure his passion; will bite his teeth on the serpent within; will hold his words, repress his spite, and so subdue the satan of temper.

If the temper is in your child, let it alone, that is, do not add temper to temper, fire to fire, by harsh words, sharp rebukes, irritating blows. Let the temper bravely alone, but do not let the child alone. Strive to awaken some other feeling in it. Appeal to its mirth, its pride, its affection, or even its cupidity rather than let it remain angry. "A soft word turneth away wrath." Gentleness is the victor of temper. If your child is in anger, act quickly; overcome it at once. Long continued anger is very harmful. Put on your pleasantest mood, speak your softest tones, assume your blandest manner, be Christian then, if never again; so will you check and finally cure the bad temper of your child.

[Written for the Valley Farmer.]

SUNSHINE.—The great elixir of life is sunshine. It is the parent of all vegetation, all flowers, all colors, and perhaps all living forms of the animate creation. It tempers the climate of our world, stirs the thousand breezes that fan our brows, lifts on its viewless hands the clouds above us, sends us every refreshing shower, lets fall every silent dew, wakes the song of every grove—in a word is the cause of all we most need and prize in our temporal abode. And yet beautiful, useful and invaluable as is sunshine, many people shut it out of their houses as an

intruder: turn their blinds and let fall their curtains against it. They often face their rooms to the North that the sunshine may not enter; make small windows and few of them that they may admit but little of that which fills the world with life.

Sunshine is one absolute essential of health, beauty and strength; and yet housewives war against sunshine, would have people sit and eat and sleep in darkened rooms; would subdue all natural light. Sunshine is essential to the healthiness of the atmosphere, and hence our houses should be well sunned; the air we breathe should be well sunned; the beds on which we sleep should be well sunned; our bodies should be well sunned, and our clothes well sunned.

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[Written for the Valley Farmer.]

THE ROADS TO RUIN.

There are many roads to ruin, and many of the young are walking in them. Parents whose hopes centre in their children little think that some of these roads lead out from under the parental roof, but such is the fearful fact.

One of the great highways to ruin is *intemperance;* and this not unfrequently leads from the childhood's home. The father loves his social glass; the mother silently acquiesces in the practice of occasional or habitual drinking; the children imbibe the idea that it is one of the necessary customs of society, and fall into it almost by necessity; the sons drink, the daughters marry young men that drink, and a crop of drunkards grow up in the family, all of which are morally abased by the pernicious practice, and some of whom go to temporal ruin—are lost to their families and society.

Another highway to ruin is *idleness.* An idle brain is the devil's workshop. Parents who have risen from poverty to competency, by hard efforts of their own, feel that their children shall have an easier road to go, and so run into the opposite extreme of giving them no employment. They let them grow up in idleness. Childhood and youth are passed in pastime and school pleasures; no profession, trade or employment is fixed upon; they live upon the paternal income, and never dream that it cannot last forever, or that there is anything else to live for but to spend money. Virtue they do not comprehend; duty is a word that will do for old saints, but not for young people of the world. Economy they hate; labor they believe in for the poor, but not for such as they; and so they enter upon the road to ruin very early which carries them into excesses and abuses which end in poverty, disgrace, and often crime.

Another road to ruin much traveled, that often leads out from home, is the *feverish love of money.* Many parents live as though money was the only God and only good. "Money makes the mare go;" money makes everything go. We must labor for money, trade for money, marry for money, form social relations for money, attend church for money, study for money, do everything for money. And so their children so crave this, which is the sole object of their parents' life, that they think they must have money in hot haste. They meditate foul schemes of gain, which end in fraud, theft, forgery, counterfeiting, robbery or murder. So great is the false pressure for money, urged by the false estimate of money in every community, that thousands enter the road to ruin every year, which ends in shameful fraud or horrid crime. They feel that they must have money; if they see no way to get it honestly as fast as they want it, they will get it dishonestly. This is a wide road to ruin spread on every side with the wrecks of character and fortune.

Money is a good thing in its place and use, but only good when honestly obtained. It turns to coals of fire in dishonest pockets. Money is a throne of power to the honest and good, but a funeral pile to the dishonest and mean. *

Hymn of the Harvesters.

We gather them in—the bright green leaves—
With our scythes and rakes to-day,
And the mow grows big, as the pitcher heaves
His lift in the swelt'ring hay.

O ho! a field! for the mower's scythe,
Hath a ring as of destiny,
Sweeping the earth of its burthen lithe,
As is sung in wrathful glee.

We gather them in—the nodding plumes
Of the yellow and bearded grain,
And the flash of our sickles' light illumes
Our march o'er the vanquished plain.

Anon, we come with the steed-drawn car—
The cunning of modern laws;
And acres stoop to its clanking jar,
As it rocks its hungry jaws.

We gather them in—the mellow fruits,
From the shrub, the vine and tree,
With their russet, and golden, and purple suits,
To garnish our treasury;

And each has a juicy treasure stored,
All beneath its painted rind,
To cheer our guests at the social board,
When we leave our cares behind.

We gather them in—this goodly store—
But not with the miser's gust;
For that great All Father we adore,
Hath but given it in trust;

And our work of death is but for life,
In the wintry days to come:—
Then, a blessing upon the reaper's strife,
And a shout at this Harvest Home.

Adolphus Gets Inspired.—"Dearest, I will build thee a cot all covered with ivy, in some secluded vale close by a purling brook, meandering over its pebbly bottom, incessantly babbling in dulcet, tinkling strains, 'love, love, love;' where the atmosphere is redolent of soothing, spicy aromas, that make the eyes languish and the heart dissolve in liquid fires of love—where the balmy morning zephyrs sigh in the dense forest's leafy maze, chanting love's melody—where the tiny songsters that whirl in the ethereal space, warble nought but love. I will plant thee a garden of gorgeous loveliness, culled from nature's most ardent designs, warmest tints and sweet-smelling incense."

'Dolphy, dear, don't forget to leave a patch for cowcumbers and inguns—they are so nice pi—kled.'

Domestic Department.

California Soap.—Five pounds of white bar soap, (or yellow, if white cannot be had,) four pounds of sal soda, one-half pound of borax, one ounce of ammonia, mixed with twenty-five quarts of pure soft water—rain-water is best. The water should be heated, and the soap dissolved in it. The other articles should be dissolved in a separate vessel in a few quarts of water—a few quarts out of the twenty-five quarts. When all is dissolved, mix them, stirring the mass well as they are poured together.

It can be made by dissolving the sal-soda, borax and ammonia, in a few quarts of water, then pouring it into about twenty-five quarts of common home-made ley and grease soap, stirring it thoroughly to mix well.

It is chiefly valuable as a washing soap.

To use it, the clothes should be put to soak the night before washing, in a hot suds, and covered over closely with a thick blanket or something of the kind to keep them warm all night. Wring them out in the morning, stirring and squeezing them pretty well in the suds; put them into a strong suds, and boil them fifteen or twenty minutes; take them out into a tub of water, wring them from this, stirring and squeezing them to get out the suds and dirt; look over the wristbands and dirtiest places and articles, they will need perhaps a little rubbing on the board; rinse them well in another water and hang them out. A little rubbing will make sure work. The saving of labor in the use of this soap is very great. Its cleansing power is searching, leaving the clothes very white. It does no injury to the clothes. We speak from the experience of several families who have used it for years and would not give it up, if their clothes could be washed for nothing in the old way. It saves the wear of hard rubbing upon the clothes, which is fully equal to the wear of using. The cost of this soap is trifling.

Curing Beef.—By most of the modes now in use, the beef becomes too much impregnated with salt, and is not, as a consequence, so fine for eating. By the following process this difficulty is prevented, and the beef will keep till the following summer: To eight gallons of water add two pounds of brown sugar, one quart of molasses, four ounces of saltpetre, and fine salt till it will float an egg. It has been repeatedly tried and found very fine. A famous beef eater says it is the only good way.

A Good Dish in Spring.—Shave a good crisp head of cabbage as fine as possible; add a teaspoonful of horse radish to each quart of shaved cabbage; let one pint of vinegar come to a boil; have ready three well beaten eggs, with a little salt; pour the eggs into the vinegar, and stir until cooked; then pour it over the cabbage, and set it way, as it is better when cold. This will keep some days and is always ready.

To detect copper in pickles or green tea, put a few leaves of the tea, or some of the pickle cut small, into a phial with two or three drachms of liquid ammonia, diluted with one-half the quantity of water. Shake the phial; when, if the most minute portion of copper be present, the liquid will assume a fine blue color.

Indian Meal Short Cakes.—Stir into a pint of milk three eggs beaten light, add a little salt and half a cupful of butter, with enough sifted meal to make a thick batter. Drop it from a large spoon upon buttered tins, and bake to a light brown color in a quick oven.

One quart of fine bolted Indian meal, one cupful of flour, one cupful of sugar, two eggs, one quart of sour milk, and a teaspoonful of saleratus. This makes Indian sponge cake.

To Keep Cider Sweet.—To 40 gallons new cider add one quart hard wood ashes; 2 oz. isinglass; 4 oz. alum. Leave the bung out ten days, then rack off and bung up tight.

Washington Cake.—Beat together one and a half pounds of sugar, and three quarters of a pound of butter; add four eggs well beaten, half pint of sour milk, and one teaspoon of saleratus dissolved in a little hot water. Stir in gradually one and three-fourths pounds of flour, one wine-glass of wine or brandy, and one nutmeg grated. Beat all well together.

This will make two round cakes. It should be baked in a quick oven, and will take from fifteen to thirty minutes, according to the thickness of the cakes.

Delicate Cake.—Beat to a cream seven ozs. of sweet butter; beat to a stiff froth the whites of eight eggs, and mix gradually with it one pound of flour together with the butter, half a nutmeg grated, and some essence of lemon or bitter almonds, or rose water.—Bake in a pan lined with buttered paper. Almonds blanched and pounded may be substituted for the butter.

Rice Pudding.—Beat half a pound of rice to powder, set it with three pints of milk upon the fire, let it boil well, and when cold put to it eight eggs well beaten, half a pound of butter, half a pound of sugar, cinnamon, nutmeg, and mace; half an hour will bake it; add raisins, candied lemon, citron or other sweetmeats, and lay a puff paste all over the sides and rim of the dish.

Wafers.—One pound of flour, eight ounces of butter, six eggs, three quarters of a pound of sugar, one ounce of caraway seed.

Boiled Flour Pudding.—Nine eggs, three pints of milk, seventeen spoonsful of flour.

Carrot Pudding.—A coffee-cupful of boiled and strained carrots, five eggs, two ounces sugar and butter each, cinnamon and rose water, baked in a deep dish without paste.

Apple Pudding.—One pound of strained apple, one pound of sugar, six eggs, one pint of cream, six ounces of butter.

Potato Pudding.—One pound boiled potatoes, one pound sugar, half pound butter, ten eggs.

Mince or Foot Pie.—Scald neat's feet and clean well, put them in a large vessel of cold water, which change daily during a week, then boil the feet till tender, and take away the bones; when cold, chop altogether very fine. To every four pounds minced meat, add one pound beef suet, and four pounds raw apple, a little salt: chop all together, add one quart of wine, two pounds stoned raisins, one ounce of cinnamon, one ounce of mace, and sweeten to your taste; bake three quarters of an hour.

Mince Pie of Beef.—Four pounds boiled beef chopped fine, and salted, six pounds raw apple chopped, one pound beef suet, one quart of wine, or rich sweet cider, one ounce of mace and cinnamon, a nutmeg, two pounds of raisins; bake three-fourths of an hour.

Custard Pudding.—Five eggs to a quart of milk, sweetened with brown sugar, and spiced with cinnamon or nutmeg, and a very little salt.

Nice Plum Pudding.—A pound of raisins cut in half and stoned, a pound of currants washed and dried, a pound of beef suet chopped fine, a pound of stale bread dried and grated, eight eggs, four ounces sugar, a pint of milk, two glasses wine, two nutmegs, a tablespoon of mixed mace and cinnamon, a salt-spoon of salt.

Editor's Table.

The Next Great Fair.—It is now admitted by all, that the greatest fairs in the United States are held at St. Louis. No other society offers such a list of Premiums. No other society has made such splendid arrangements—no other society has erected such magnificent buildings. The next Great Fair will commence on the 24th of September, and continue six days. Over Twenty-Two Thousand Dollars are offered in Premiums!! No other society in the world has offered anything like it. The able, energetic and efficient President, Captain A. Harper, is devoting all his time and energies to the interests of the Association, and will make the next Fair by far the most successful one that has yet been held in all its various departments. Captain Harper is a gentleman of large experience, ripe judgment, and having been a Director for several years, and being a practical agriculturist and stock-breeder, and, withal, a most enterprizing gentleman—yet keeping within the bounds of reason—he is well fitted for the position of President of this Society, and our friends everywhere can rely that everything relating to the Fair will be conducted in the most honorable and satisfactory manner. We expect to see such a crowd in attendance as we have never before witnessed.

Inventions and Improvements.—The doings in the United States Patent Office for the week ending June 26th, 1860, show that among the patents granted on farm machines, are the following, viz: For Corn, Cotton and other Seed Planters, thirteen patents; Cultivators, eight; Plows and Harrows, seven; Unloading Hay, three; Harvesters, Grain Binders and Corn Huskers, four patents were granted. This shows only the patents granted in a single week on eight different implements, while the entire list shows many others on similar implements and machines relating to the farmer's labors. These improvements all aiming to aid the farmer in his toils, are surely encouraging signs of the times.

Fall Meetings of the Missouri Fruit Growers' Association.—The members of this Association are hereby notified that there will be a meeting of this Society at Hermann, on the 7th and 8th of September, for the Exhibition of Fruits and the Discussion of Pomological subjects. A large number of new fruits, comprising Grapes, Peaches, Apples, &c., will be exhibited and their merits tested.

The Gasconade County Fair will be held at Hermann on the two days preceding this meeting, at which there will be a splendid exhibition of Fruits and Flowers; and the members of this Association have been politely invited by the officers of that Society to be present at the Fair.

There will also be a meeting of the Missouri Fruit Growers' Association in Pomological Hall, on the Fair Grounds of the St. Louis Agricultural and Mechanical Association, at its next Fair, commencing Sept. 24th, and continuing during the week.

All persons feeling an interest in Pomology, are cordially invited to attend these meetings.

NORMAN J. COLMAN, President.

Dr. L. D. Morse, Cor. Sec.

FAIRS.

State Fairs for 1860.

National Horse Show,	Springfield, Mass.	Sept. 4—7.
Illinois,	Jacksonville,	" 10—14.
Vermont,	Burlington,	" 11—14.
Pomological Society,	Philadelphia,	" 11—14.
Kentucky,	Bowling Green,	" 18—22.
Nebraska,	Omaha,	" 19—21.
Pennsylvania,	Wyoming,	" 22—25.
St. Louis,	St. Louis,	" 24—27.
Wisconsin,	Madison,	" 24—27.
Maine,		" 25—26.
Ohio,	Dayton,	" 25—28.
United States,	Cincinnati,	"
Upper Canada,	Hamilton,	"
Iowa,	Iowa City,	Oct. 1—
New York,	Elmira,	" 2—
Oregon,		" 9—
Indiana,	Indianapolis,	" 15—20
Georgia,	Augusta,	" 22—27
Alabama,		Oct. 29 to Nov. 2.

Fairs in Missouri for 1860.

Platte County,	Platte City,	Sep. 25—30.
Newark "	Newark,	" 3—7.
Lafayette County,	Lexington,	Oct. 2—6.
Central District,	Boonville,	" 1—5.
S. E. District,	Cape Girardeau,	Oct. 11, 12, 13.
Howard County,	Fayette,	Aug 29 to Sep. 1.
Osage County,	Linn,	Oct. 4th and 5th.
Jackson County,	Independence,	Sept. 4—9.
Benton County,		" 25—27.
Saline County,	Miami,	" 4—8.
Bates County,		Oct. 17—20.
Cass County,	Pleasant Hill,	Sept. 26—29.

Will the Secretaries of County Societies send us the time of holding their Fairs?

Tennessee Fairs for 1860.

State Fair,	Nashville,	Sept. 10—15.
Middle Division,	Franklin,	Sept. 24—28.
Bedford County,	Shelbyville,	Sept. 18—22
Putnam "	Cookeville,	Oct. 1—4.
Maury "	Columbia,	Oct. 1—6.
Smith "	Rome,	Sept. 26—29.
Marshall "	Lewisburg,	Sept. 11—14.
Warren "	McMinnville,	Oct. 9—11.
Giles "	Pulaski,	Oct. 23—27.
Sumner "	Gallatin,	Sept. 2—8.

From North-Western Missouri.—"The country is suffering for rain; farmers are almost disheartened. Wheat was nearly a failure. An old farmer remarks, that the fields that were considered worth cutting, would average about four bushels per acre. Grass has been an entire failure; hemp that is considered worth leaving is very thin; corn—the only dependence—after having been replanted, is very spotted—unless it rains in a few days will prove nearly a failure. The chintz bug is busy trying to destroy the crops that are left—the army worm is making its appearance. G. W. H.

St. Joseph, June 27, 1860."

☞Our ever attentive friend, Geo. Husmann, will accept our thanks for a box of delicious apples and pears. They were beautiful specimens of early fruit; and they were as good as they were beautiful.

Osage County (Mo.) Fair.—Thanks to this young and enterprizing Society for their partiality to the Valley Farmer. They have offered over one hundred and thirty copies of our Journal as Premiums.—If all the County Societies in the State would imitate Little Osage, it would not be long before every farmer would be a reader of our Journal.

Mr. J. K. Kidd, the efficient President, deserves much praise for his efforts in behalf of the Society. If possible, we shall accept the polite invitation extended to us to deliver the annual address.

Howard Co. (Mo.) Fair, Aug. 29th.—Howard County is the first in the field with her Fair this year, which will be held at Fayette, commencing on the twenty-ninth of August and continuing four days.—This is the Seventh Annual Fair of this Society, and as it does not conflict with other fairs, we have no doubt there will be a splendid exhibition. Friends of the neighboring counties attend! You will receive a hearty welcome.

S.E. District (Mo.) Agricultural Fair, at Cape Girardeau, Oct. 11, 12, 13.—This Fair will be held as above, and we earnestly request the farmers and planters of South-Eastern Missouri to attend en masse. Prepare to be exhibitors, and do all you can to add to the extent and interest of the exhibition.

We see that the gentlemanly Directors have offered upwards of Forty copies of the Valley Farmer for Premiums. Thank you, gentlemen, and we will try to make the Premium a most acceptable one to all who receive it.

Many other Agricultural Societies have likewise offered a large number of copies of the Valley Farmer, and we think very properly, for no Premium will prove more useful, especially to such as now know nothing of the merits of a good Agricultural Journal.

The Monroe Co. (Ill.) Agricultural Society, will hold its next Fair at Waterloo, on the 16th, 17th, and 18th days of October.

The Franklin Co. (Mo.) fair will be held at Union on the 13th, 14th and 15th of October next—Judge Gale, President; Jas. J. Breckenridge, Secretary.

☞ The Macoupin County (Illinois) Agricultural Society, will hold its next Fair at Carlinville, on the 2d, 3d, 4th, and 5th days of October, 1860.

The Clark Co. (Mo.) Fair, will be held at Waterloo, on the 13th, 14th and 15th days of September.

Meramec Horticultural Society.—This Society will hold their Fall Exhibition at Allenton, on the 12th and 13th September. They offer quite a large list of Premiums, and will have a pleasant and profitable exhibition.

Eds. Valley Farmer.—In your July No. I see you highly recommend some Patent Glass Jars for Preserving Fresh Fruit. Wishing to procure some of them, I inquire of you if they can be procured in St. Louis. Subscriber.

Reply—The Glass Jars recommended by us in the July Number, page 216, are kept for sale by Mr. Chauncey I. Filley, No. 108 Main street, St. Louis.

Lafayette (Mo.) Fair,—By reference to the List of Premiums, &c. of the Lafayette Fair, in this day's paper, it will be seen that several material changes have been made in that list, by which some $400 are added in the way of Premiums, in rings that must bring an increased interest, and add a spirit of emulation to exhibitions never before witnessed at our annual fairs. We append again a list of the sweepstake premiums:

Best Stallion, any age or purpose, free to all,	$300
2d best " " " "	10
Best Stallion, ...	50
Best Trotting Roadster Stallion, all purposes,	100
2d best " " " "	50
Best Jack, ...	100
2d best Jack, ...	25
Best Mare, ...	50
Best Bull, ...	100
2d best Bull, ...	50
Best Cow, ...	50

In the regular rings, we find the following liberal Premiums:

Power Hemp Brake, ...	25
Best pair harness Horses, ...	20

With $10 for best animals of all kinds in their respective rings. This is doing the thing properly, and cannot fail to meet with proper encouragement.

The pavilion and ring at the ground is being improved; and we feel sure that our next fair will be ushered in under more auspicious circumstances than any of the former ones, if exhibitors shall respond to the liberal advances of the Society.—[Lexington Express.

Putting up Fruit in Glass Jars.—Glass jars are undoubtedly preferable to tin cans for keeping fruit. We are glad to be enabled to announce, that Mr. Chauncey I. Filley, No. 108 Main Street has the largest and finest assortment of Jars for keeping fruit hermetically sealed, in the city. He has all the latest patents and improvements, and fruit can be put up and kept safely for almost any period without the use of sealing wax. We urge all our subscribers to put up an abundance of fresh fruit, and if they are in want of Cans to procure them of Mr. Filley, whose advertisement will be found in the present number of the "Farmer."

Mr. Filley has also the largest and finest assortment of Chinaware in the city, and all dealing with him will find him to be a gentleman—honorable in all his transactions.

County Agricultural Societies.—Secretaries or other officers of County Agricultural Societies will confer a favor by sending us a list of the Officers of their respective Societies, with the Post-Office address of each officer; time of holding exhibition, and any other matter of interest relating to the Society. For this favor, when requested, we will furnish a copy of the Valley Farmer, without charge to the Society.

Sugar from Chinese Sugar Cane.—Messrs. Blymyers, Bates & Day, whose advertisement appears in this Number, forwarded to us a sample of sugar, made by Mr. Isaac Kansner, from the Chinese Sugar Cane. Mr. Kansner's certificate appears in their advertisement. The article of sugar is good, and we are satisfied a fair article can be made if properly managed, by the use of Cook's Patent Evaporator. Those wishing to manufacture sugar are referred to their advertisement.

XUM

The Rural New Yorker.—We again welcome to our table this sterling weekly agricultural and horticultural journal, which, by some mistake, we have failed to receive for some time past. This is one of the most enterprising papers of the kind published. It is not only rich in agricultural and horticultural information, but it is also heavily freighted each week with choice family reading. Published by D. D. T. Moore, Rochester, N. Y. at $2 per annum.

Godey's Lady's Book.—This is the best of the magazines for lady readers. Its enterprising publisher is always up with the times, and though he has been before the public for many years his magazine is as beautiful, as lively and more entertaining than ever. As the publisher grows older, his pet magazine seems to become younger and increase in beauty and attractiveness as the years pass by. Those wanting the best magazine published, should send $3 to L. A. Godey, Philadelphia, Pa., and they will be sure to get it.

Farmer and Gardener.—This monthly periodical comes to us for July in octavo form, and much improved in appearance. We are glad to see the name of William Saunders nailed to the mast-head of the horticultural department. This department will be entirely under his charge hereafter. We know of no one in this country better qualified to conduct this department than Mr. Saunders. The "Farmer and Gardener," and the "Gardener's Monthly," are creditable institutions to the beautiful city of Philadelphia; and they richly deserve, as we sincerely hope they receive a large and paying patronage.

Note from a New Subscriber.—Eds. Valley Farmer: About two weeks ago, I determined to subscribe for your paper. I had seen frequent favorable notices of it, but supposed it was filled with fanciful speculations in regard to Agriculture and Horticulture, and would be of no practical value to me. However, I concluded I had sense enough not to be deceived by its teachings, and subscribed, knowing that a dollar only would be sacrificed, if it proved worthless. I sent you a dollar, and in due time received the back numbers for the present volume. I took them up one by one and looked through them, rather carelessly at first, but soon became interested in the articles—so much so, that I took the January Number and read every article in it, Advertisements, and all, and then the February No. in the same way, and I have devoted my leisure time since to reading through all the numbers, and I find I was never more mistaken in my life, than in the former opinion I entertained of your valuable Journal. Instead of being devoted to fancy farming, to theoretical farming, I find it eminently practical—every article relating to Agriculture, Horticulture, &c. being written, if I am any judge at all of such matters, by practical men—men raised upon the farm, in the garden and orchard, who have had the best systems of culture before them. The Monthly Notes of Mr. Carew Sanders have been read with very great interest by me—and I can't see how I have got along without your paper heretofore. I feel satisfied that if I could have had the benefit of its teachings it would have been of the greatest value to me every year in my farming operations. Can you supply me with any of the back volumes bound or unbound; how many, and at what price? I must have all you can spare. You will find enclosed, three dollars for the Farmer, to be sent to three of my neighbors, whose names and post-office you will find below. I shall endeavor to procure you all the subscribers I can—truly believing your valuable Journal should be in the hands of every farmer.

Yours truly, J. H.

Jefferson Co. Mo.

Remarks—We thank our newly-made acquaintance for the high opinions he has expressed of our Journal and for the subscribers he has sent. His letter is but one of hundreds that we are receiving, speaking in the highest praise of the Farmer, but we have not been in the habit of publishing them. We have kept quietly and patiently at work, endeavoring to make our Journal better and better: we believe the entire body of our subscribers, if questioned, would speak as warmly in its praise, as our correspondent has. We can inform J. H. that the Editors of the "Valley Farmer," are men who were raised "upon the farm, in the garden and orchard," and write chiefly from their own experience and observation. We can furnish bound volumes of the "Valley Farmer" for 1856, 1857, 1858 and 1859, at $1 50 per volume.

Trial Subscribers—Great Reduction in Price for Trial Subscribers.—Being determined to extend the circulation of the Valley Farmer into every Western Farm Home, if possible, at almost any sacrifice, and as we can only do so by obtaining new subscribers, we make the following liberal offer:

We will send all the numbers of the Farmer for 1860 to all new subscribers whose names are sent before the first of October, for Fifty Cents. Now, farmers, invest this trifling sum to give our Journal a fair trial. Try it for 1860, and we feel satisfied that you will then put your name on the "roll of honor" for life. The actual cost of each copy of the Farmer is about seventy-five cents a year, yet we are willing to make this sacrifice to secure you as permanent subscribers. Every present subscriber is authorized to act as Agent in procuring New Subscribers at these rates, and earnestly solicited to send along as large a list as possible. Whom shall we hear from?

Agricultural Resources of Texas.—An enthusiastic Texas journal makes the following predictions with regard to the positive productions of that State:

1st. That before five years, we will ship direct to Europe, at least half a million bales of cotton!

2d. That the production of wheat and barley in Texas, will equal in importance that of her cotton crop!

3d. That the coast counties will be able to supply the demand of Texas, and ship a portion of her surplus sugar crop!

4th. That the sheep of Texas will number many millions; and their fleece add much to the wealth of our State—which there is no reason to suppose will fail to be realized.

If the population of Texas shall increase as rapidly as her products are expected to do, they will be able to make two or three new States in the course of a few years.